

Proceedings of the European Conference on Intellectual Capital

INHolland University of Applied Sciences
Haarlem
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Edited by

Christiaan Stam
InHolland University of Applied Sciences

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Preface

These proceedings represent the work of presenters at the European Conference on Intellectual Capital (ECIC 2009).

The Conference is hosted this year by INHolland University of Applied Science in Haarlem, The Netherlands. The Conference Chair is Daan Andriessen, Centre for Research in Intellectual Capital, INHolland University and the Programme Chair is Christiaan Stam, also from the Centre for Research in Intellectual Capital, INHolland University.

The opening keynote address is given by Professor Leif Edvinsson, Lund University, Sweden and The Hong Kong Polytechnic University, China. On the second day of the conference Verna Allee from Value Networks LLC, USA will talk on the subject of “*Getting to the right questions about intangibles*”

A primary aim of this conference is to contribute to the further advancement of IC theory and practice. The conference provides a platform for presenting findings and ideas for the intellectual capital community and associated fields. The range of people, issues, and the mix of approaches followed will ensure an interesting two days.

121 abstracts were received for this conference. After the double blind, peer review process there are 69 papers published in these Conference Proceedings. These papers represent truly global research from some 31 different countries, including Australia, Belgium, Brazil, Canary Islands, Finland, Germany, Greece, Hong Kong, Hungary, India, Israel, Italy, The Lebanon, Mexico, The Netherlands, Norway, Poland, Portugal, Principality of Liechtenstein, Romania, Russia, Serbia, Slovenia, Spain, Sweden, Taiwan, Thailand, Turkey, Uganda, United Kingdom and USA.

We hope that you have an enjoyable conference.

Daan Andriessen
Conference Chair

Christian Stam
Programme Chair

April 2009

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Friedel Libor, Tomas Bata University, Zlin, Czech Republic	

Biographies of Conference Chairs, Programme Chair and Keynote Speaker

Conference Chair



Dr. Daniel Andriessen is Professor of Intellectual Capital at INHOLLAND University of professional education, The Netherlands, and director of the INHOLLAND Centre for research in Intellectual Capital, a research group set up to study the impact of the intangible economy on people and organizations. Recently, his centre organized the very successful Intellectual Capital Congress 2007 in May in Haarlem (The Netherlands), a congress that will be repeated in May 2009 (www.iccongress.com). Through his Weightless Wealth Research Group he offers help to companies, governmental and educational organizations, academics, and students on the subject of knowledge management and intellectual capital valuation and measurement (www.weightlesswealth.com). He is a popular speaker at conferences and likes to do guest lectures, presentations, and training sessions on a variety of subjects related to

the growing importance of intangibles. Daniel received his Ph.D. degree at Nyenrode University in The Netherlands and he holds a masters degree in political and administrative science at the Free University, Amsterdam. His publications include *Value-Based Knowledge Management: Creating the 21st Century Company: Knowledge Intensive, People Rich* (Addison-Wesley, 1998), with Prof. Dr. René Tissen and associate professor Frank Lekanne Deprez. Together with Prof. Dr. René Tissen he wrote *Weightless Wealth: Find Your Real Value in a Future of Intangibles Assets* (Financial Times Prentice Hall, 2000). His PhD thesis was published in 2004 by Elsevier Butterworth Heinemann and was entitled *Making Sense of Intellectual Capital; Designing a Method for the Valuation of Intangibles*. In his recent research Daniel explores the role of metaphor in knowledge construction and science. When he realized that the term Intellectual Capital is in fact based on specific metaphors for knowledge he decided to analyze the various metaphors we use for knowledge and their impact on knowledge management. An analysis of metaphors in the work of Stewart, Davenport & Prusak and Nonaka & Takeuchi was published in the *Journal of Intellectual Capital: Andriessen, D. (2006) On the metaphorical nature of intellectual capital: a textual analysis, Journal of Intellectual Capital, vol. 7 (1)*. In his keynote Daniel will share with you the latest results of his research into metaphor and knowledge management.

Programme Chair

Dr Christiaan Stam (1965) is Associate Professor at the Centre for Research in Intellectual Capital at INHOLLAND University of Applied Sciences (www.inholland.nl/intellectualcapital). Central themes in his work are knowledge management, intellectual capital measurement and knowledge productivity. In 1999 he initiated www.intellectualcapital.nl, a startpage for the IC-community. In December 2007 he successfully defended his Ph.D. thesis in Knowledge Productivity at Twente University, The Netherlands. For more information and a list of publications see: <http://www.intellectualcapital.nl/ChristiaanStam/home.html>.



Keynote Speakers

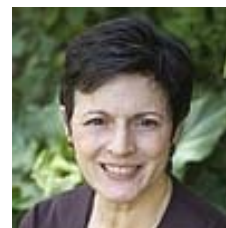


Professor Leif Edvinsson is a key pioneering contributor to the theory of Intellectual Capital and sometimes named as the Grandfather of IC. As the world's first director of IC in 1991 he initiated the creation of the world's first public corporate Intellectual Capital Annual Report 1994, and inspired the development ever since on IC metrics. He was parallel to that starting the Skandia Future Center as a Lab for Organisational design, one of the very first in the World in 1996, and now being followed by many in various parts of the world. During 1996 he was recognised with awards from the American Productivity and Quality Centre, USA and Business Intelligence, UK, for his pioneering work on IC. In 1999 noted as Most Admired Knowledge Award on Knowledge Leadership. He was also

awarded The KEN Practitioner of the Year 2004, from Entovation International, where he also is an E 100. In January 1998, Leif received the prestigious Brain Trust "Brain of the Year" award, UK. In 2006 also listed in a book by London Business Press, as one of The 50 Most influential Thinkers in the World. He is listed in Who's Who in the world. Also associate member of The Club of Rome. He is also Cofounder and Chairman of The New Club of Paris, focused on the Knowledge Economy initiatives. Leif has his education from the University of California, Berkeley, USA, as MBA and Lund University, Sweden, as civilekonom. He is the author of numerous articles on the service management and on Intellectual Capital. In March 1997, together with Michael S. Malone, he launched one of the very first books on Intellectual Capital. Leif is serving on the

Board of Directors of several knowledge intensive enterprises among others earlier the Swedish Brain Research Foundation as well as for many years the Center for Molecular Medicine at Karolinska Institute, Stockholm, Sweden. Since 2000 he has been the Honorary Chairman of the UK based Henley College, KM Forum. Since 2000, he has been the world's first Professor, adjunct at Lund University on Intellectual Capital. In January 2006, he was also appointed professor adj. at The Hong Kong Polytechnic University, and later promoted to Chair Professor in 2007.

Verna Allee is CEO of Value Networks LLC, (www.valuenetworks.com), the leading provider of value network visualization and analysis applications. Customers include Cisco, Boeing, SAP, Rolls Royce Marine Engine, Bristol-Myers Squibb, Symantec, Knoll, Kimberly-Clark, AgResearch, Mayo Clinic and others addressing regional innovation, global finance, large healthcare networks, and emerging industries. Ms. Allee, a noted author, is an expert and pioneer in value networks, intangibles, knowledge management, and new business models. She is a Fellow of the World Business Academy, advisor to the European Commission, and was a member of the Brookings Institution Task Force on Intangibles in 1997. She is on a number of Advisory and Editorial Boards including Hazel Henderson's Ethical Markets television series, Inside Knowledge, and IC (Intellectual Capital) Magazine. Ms. Allee has been a visiting lecturer at many universities around the world, most notably at the Marshall School of Business at the University of Southern California (Los Angeles), Greenwich University (London), Hanken Swedish School of Business (Helsinki), University of Waikato (New Zealand), and Cortrugli Business Academy (Croatia). Her publications include numerous articles and books, including *The Future of Knowledge: Increasing Prosperity through Value Networks* (2003), and *The Knowledge Evolution* (1997).



Biographies of contributing authors (in alphabetical order)

Mary Adams is President of Intellectual Capital Advisors (ICA), a management consulting firm. She is the creator of the Intellectual Capital Knowledge Center, an internet-based bibliography of information about IC. She blogs at Smarter Companies about the challenges of putting knowledge to work in the 21st century corporation. Mary has a background from Citibank and Sanwa Business Credit, and received a BA from Rice University and Master of International Management from the AGSIM (Thunderbird).

Fida Afiouni is an Assistant Professor of Management at the American University of Beirut and a consultant in management and HRM. She is the winner of the Sharjah award for the best doctoral thesis in administrative sciences in the Arab world for the year 2005. She is the author of several articles such as "Human Resource Management and strategy in the Lebanese banking sector, is there a fit" in the Journal of American Academy of Management, Cambridge and "Leveraging human capital and value creation by combining HRM and KM initiatives" in the International Journal of Learning and Intellectual Capital. Her research interests are in human capital, strategic Human resource management, Human resource development and Knowledge creation and management.

Carmen Agüero is researcher at the Foresight Studies Center of Monterrey Institute of Technology (ITESM)-Mexico. PhD candidate in Economy, Innovation Management and Technological Policy at Complutense University of Madrid-Spain. She received an MBA degree at Catholic University of Peru. Her research interests are in the areas of Knowledge Management, Intellectual Capital Management, Collaborative Networks, Regional Development and Systems of Innovation.

Regina Asato is Master of Science in Software Production Engineering (MSc. Master Degree) by Paulista University - São Paulo – Brazil. Since 2004 is PMP (Project Manager Professional – PMI). She has 17 years of experience in information system development for companies on Financial, Bank, Insurance and Industrial fields. She minister courses of software quality. Its main interests in research are in the areas of SPI (Software Process Improvement), Project Management and Governance.

Ossi Aura has defended his thesis "Worksite Fitness Policy in an Intellectual Capital Framework" at Swedish School of Economics and Business Administration in 2006. He is a former researcher in biomechanics and sports physiology in the University of Jyväskylä. Aura is currently working as a scientific director in Elisa Health & Fitness responsible for programs and research of strategic wellness.

Schelte Beltman has a background as an organizational anthropologist and has a successful track record in both managing and delivering executive education in the Netherlands and the United Kingdom. This experience is used as a hatchery for his PhD research on manifestations of organizational culture in

institutions offering higher education. He is a research fellow of the Centre for Research in Intellectual Capital and coordinator of the Research School of INHolland University of Applied Sciences.

Tim Berretty is a junior researcher at SEOR (www.seor.nl) with a strong affinity for quantitative analyses. His former work was mainly on the fields of welfare policy, labor market forecasts and education and he has much experience in econometric modeling and working with large datasets. He has a master degree in econometrics and a bachelor degree in psychology.

Constantin Bratianu is professor of Strategic Management and Knowledge Management at the Academy of Economic Studies, Bucharest, Romania. He is the Head of UNESCO Department for Business Administration, and Director of the Research Center for Intellectual Capital, Academy of Economic Studies, Bucharest. His main academic and research interests are: knowledge dynamics, knowledge management, intellectual capital, strategic management and university management. He is co-editor of the academic journal *Management & Marketing*, and co-president of the annual International Conference on Business Excellence, Brasov, Romania.

Sladjana Cabrilo works as Research Fellow at the Institute of Industrial Engineering and Management, Faculty of Technical Sciences, University of Novi Sad, Serbia. She holds Dr. Tech. and M.Sc. (Eng.) in Industrial Engineering and Management from University of Novi Sad (Serbia). Her main research areas are knowledge management, intellectual capital and business performance measurement and management and her current interests focus on measuring and reporting of intellectual capital. She has authored and co-authored numerous academic articles and papers on intellectual capital, its measurement and disclosure and has presented worldwide. She is a member of Intellectual Capital Group at Regional Chamber of Commerce (Serbia) and she also acts in public sector.

Daniela Carlucci is Assistant Professor at the University of Basilicata. Her research interests encompass knowledge management, knowledge assets and intellectual capital assessment & management, innovation, business performance measurement and management, decision making in organizations and decision support methods. Her work is published in refereed journals and books

William Chang is an assistant Professor for Department of Finance, Ming Chuan University of Taiwan. His research interest is on intangible assets management and financial planning in IT industry.

Hui-Ru Chi is a doctoral student at the Graduate institute of Human Resource Management, National Changhua University of Education, Taiwan. Her major is in the areas of technology management and organizational innovation management. She is a Lecture in the department of Finance at National Taichung Institute of Technology in Taiwan.

Joy Chia is a senior lecturer and program director of the public relations undergraduate and post graduate programs at the University of South Australia. Joy is Fellow of the Public Relations Institute of Australia (PRIA) and past SA, PRIA president and national PRIA, board member. Joy and research partner, Associate Professor Margaret Peters were awarded a Canada-Asia Program Award, International Council for Canadian Studies, to undertake research into employee commitment to social capital investment in credit unions in Australia and Canada. This is work in progress resulting in publications in several international journals.

Marion Collewet is a junior researcher at SEOR. She studied political science and economics in France, Germany and the U.K. She has progressively specialized in research about the labour market, policy evaluation and the role of different stakeholders (state, employers, employees).

Verena Dorner is currently working as a research assistant at the Chair of Business Computing II at the University of Passau. She graduated from the University of Passau in 2006, majoring in business administration and management. Her main research interests include the management of information systems and information technology skills, especially in small and medium enterprises, methodology and quality of survey research in information systems research, and information systems and technology project portfolio optimisation.

John Dumay is a Lecturer in Accounting at the Faculty of Economics & Business at the University of Sydney. His thesis and continued area research interest is based on the study of the implementation of IC practices in organisations. In particular he is interested in the application of IC narratives.

Susanne Durst is a research assistant and lecturer at the Chair of International Management, Institute of Entrepreneurship, University of Liechtenstein. Furthermore she is a doctoral student at the Leslie Silver

International Faculty, Leeds Metropolitan University. Her current research interests include: intangible assets, knowledge management, SMEs related topics such as branding and internationalization.

Feray Erselcan is Lecturer in the Department of Economics at Cumhuriyet University, Sivas, Turkey, since 2000. She graduated from the Department of Economics of the Middle East Technical University in 1983 and started her carrier as a commercial expert. She has served as a Commercial Counsellor at the Turkish Delegation to OECD (1989-1992) and at the Turkish Embassy in Helsinki (1997-2000). Her main areas of interest are international trade, development, gender and environment.

Silvia Ferrão BSc of science with honors (a five year degree) in Computer Management, a postgraduate study in computer engineering and she is currently doing her PhD in Knowledge Management, particularly on competences acquisition on Virtual Learning Environments. She's a lecturer in computer management, at the Polytechnic Institute of Leiria, Portugal.

Santanukumar Ghosh is a Professor in the Department of Commerce at the University of Burdwan in India. He has been engaged in teaching and research since 1984. He is presently conducting research on the sustainable business model, CSR reporting besides areas like intellectual capital, modern theories of capital structure, mutual funds and transparency & disclosure in financial reporting. He received Best Research Paper Award from Bentley College, USA and IBS Hyderabad in 2008. He presented a paper at the GRI Global Conference in 2008.

Ramón Galván. Doctor in Economic Science and Management by the University of Extremadura, Badajoz, Spain. Professor in Business Administration and Knowledge Management. Member of the Research Centre for Knowledge Management. Project Director of the Spanish guide for the best European practices in knowledge management of the European Committee standardization.

Ramin Gamerschlag. University studies. Since 09/2008: Georg-August-Universitaet Goettingen, PHD-Program in Management Accounting 10/2006 – 08/2008 Georg-August-Universitaet Goettingen, Master in Management. Degree: Master of Science (M.Sc.). 09/2001 – 06/2005 Fachhochschule Hildesheim/Holzminen/Goettingen, Industrial Engineering and Management. Degree: Diplom (FH) Wirtschaftsingenieur. Work Experience. Since 09/2008 Georg-August-Universitaet Goettingen, Chair of Management Accounting and Control, Scientific Assistant. 07/2005 – 09/2006 Henke-Sass, Wolf GmbH Tuttlingen, Quality Manager. 02/2004 – 06/2004 Volkswagen AG Kassel, student apprentice

Annie Green has a Doctor of Science from the School of Engineering and Applied Sciences at The George Washington University (2004) (Concentration: Intangible Asset Valuation) and a Masters Science of Information Systems (MSIS) from George Mason University.

Annabella Dorothy Habinka is an Information Systems researcher with special interest in Knowledge Management at Mbarara University of Science and Technology, Uganda. She is a strong advocate for the studio based approach as presented in the paper “Knowledge Management for Small and Medium Enterprises in Developing Countries – Uganda a Studio-based Approach”.

Tamás Harangozó is graduated as an economist (MA) at the Faculty of Business Administration of the Corvinus University of Budapest in 2007. Currently he is a Ph.D. student at the Institute of Management of the same university and his research activities are management control process of intellectual capital and the possible performance-based and behavioural aspects of it. His theoretical and practical interests cover particularly management control (controlling), performance management and organizational behaviour.

Jasper Hsieh is an assistant Professor for Graduate Institute in Aesthetics and Arts Management, Nanhua University of Taiwan. His recent research is on the dynamics of resources in innovative organizations.

Robert Huggins: Director of the Centre for International Competitiveness at the Cardiff School of Management, University of Wales Institute, Cardiff. As the Co-Founder of the World Knowledge Competitiveness Index and Originator of the European Competitiveness Index and UK Competitiveness Index, his research aims to inform corporate strategy and public policy, especially actions aimed at improving global competitiveness.

Elina Hyrkäs is a Ph.D. student at the Lappeenranta University of Technology in the department of business administration. Her research interests include knowledge management in general and especially strategic based competence management, HRM and intellectual capital. Her dissertation topic is competence management in Finnish municipalities.

Aki Jääskeläinen (M.Sc. Eng.) works as a researcher on the Performance Management Team in Tampere University of Technology, Finland. He has written research articles on intellectual capital and performance measurement. He has also participated in many development projects related to performance management in Finnish organisations. His current research interest focuses on productivity measurement of public services. He is also pursuing his doctoral thesis on the topic.

Aino Kianto is a Professor of Knowledge Management in the School of Business at Lappeenranta University of Technology, Finland. Her teaching and research focus on knowledge management, intellectual capital, creativity, innovation and organizational renewal. Her current interests include the knowledge-based view of the firm and measurement of knowledge-related phenomena in organizations. She has authored and co-authored several academic articles, papers, books and book chapters related to knowledge management, intellectual capital and innovation. In addition to the academia, she also has worked with the Future committee of the Finnish parliament and regularly lectures for companies.

Elżbieta Kot born the 2nd of March 1983 in Warsaw, Poland; graduated from the Department of Tourism and Recreation at Academy of Physical Education (M.Sc) in 2006 and from the Faculty of Finance and Banking at Academy of Finance in Warsaw (M.Sc) in 2008; from 2006 - PhD student and teaching assistant in Basic Economy and Finance Department at the Academy of Physical Education in Warsaw; professional tour leader.

Philippe Leliaert is an independent management consultant, specialised in organisational development & change, and an Intellectual Capital practitioner. He is a visiting lecturer at several business schools in Europe, Asia-Pacific, and Latin America, and a regular presenter at conferences and seminars on the identification, measurement and management of Intellectual Capital.

Rosetta Lombardo. Current Position: Research Fellow: ,Department of Economics and Statistics, University of Calabria, Italy.. Education 1992 Degree in Economic and Social Science [110/110, "cum laude"]University of Calabria, 1995 MA in Economic and Social Studies, University of Manchester, 2001 Ph.D. Political economy, University of Naples "Federico II"

Satu Luoma, M.Sc. (Tech) has graduated in Information and knowledge management from Tampere University of Technology (TUT), Finland in 2008. She works as a researcher at the Department of Business Information Management and Logistics, TUT. Her research interests include knowledge management, competence management and social media.

Anca Mândrăleanu is a last year PhD student at the Academy of Economic Studies Bucharest and her main field of interest is Intellectual Capital. Her PhD thesis studies the role of the main integrators in generating and developing the IC and has many connections with the economic and business environment. Anca is a member of the Intellectual Capital Research Center from the Academy of Economic Studies Bucharest, and she is involved in several research projects on the same topic. Also, Anca Mândrăleanu is an Assistant Professor at the Faculty of Business Administration, where she teaches Business Management and Entrepreneurship.

Ginoglou Manolis was born on 13 June 1983 and lives in Thessaloniki. He is a graduate of the Economics Department of the Aristotle University of Thessaloniki and holds a Masters Degree in Accounting and Finance from the Department of Accounting and Finance of the University of Macedonia. He currently follows the MBA Course of the University of Macedonia and is planning a PhD in Accounting. He works primarily as an Accountant and Business Consultant.

Henrik Martin is CEO of Intellectual Capital Sweden AB (ICAB), a leading IC service provider who has developed the unique IC Rating™, a tool for measuring Intellectual Capital. The tool has been used more than 400 times and has been licensed to partners in more than 30 countries. Living in Stockholm, Sweden, Henrik has a background from McKinsey&Company, and holds a M.Sc. and B.Sc. in Electrical Engineering from MIT.

Florinda Maria Carreira Neto Matos. Master of Science in Management Science. PhD Student in the area of Human Resources, at Instituto Superior de Ciências do Trabalho e da Empresa - ISCTE Business School, Lisbon. My current field of research and interest is focused on organizational change innovation and intellectual capital management. Guest Teacher at ISCTE and at ISCE - Instituto Superior de Ciências Educativas. Wide experience as Consultant and Coacher in SME's (small & medium enterprises).

Sue Molesworth is a Research Associate at the Clinical Effectiveness Support Unit at the University of Keele, Staffordshire, UK. Her research interests are: organisational research in healthcare settings; how

vulnerable/socially excluded groups experience services; the use of participative research methodologies in healthcare settings; and the application of qualitative methodologies in healthcare research. Prior to her employment as a researcher, Sue has mainly worked in community and service development both in the voluntary and public sectors.

Neva Maher graduated in Economics from the University of Ljubljana, in Slovenia. She was a counsellor to the President of Court of Audit of Slovenia. As a state auditor she performed audits and evaluations. Then she was a state undersecretary at the Ministry of labour, family and social affairs and working on European Social Fund management system, its procedures, etc. She is expert on accountancy and finance. She has wide knowledge and practical experience of structural funds system and procedures, in setting administration and programmes, including application packages, establishing of evaluation and selection procedures, capacity building, training and preparation of projects, guidelines and manuals. She is skilled in social measures programming, implementing policies, projects and programmes, funding indicators and information data, financial management, monitoring and evaluation needs. Analysis and follow up, praxis to create flexibility in policy management and public accountability. Involved in writing several manuals (for auditing, controlling, monitoring, implementing and evaluation). Skilled in training for sound financial management and controls, programmes for SME, action plans for trade – internal EU market and external market, training civil servants and developing training programmes for SME entrepreneurship, she is an assistant professor at High School for Business and Management in Novo mesto. She gives lectures in accountancy, finance and marketing. She is the author of several articles on employment, social and economic development matters.

Milly Perry Researcher, CKO and Research director at The Open University of Israel. PhD. in Information science, KM expertise. Bar Ilan University, Israel. " aKadeMya " CEO, CoP for managers and scholars implementing Knowledge Management in Higher education (sponsored by Microsoft) Member of the National Committee for Israeli's Researchers Database. Management committee member at The European network for ScienceAnd Technology Research In a Knowledge - base Economy (STRIKE)and a OECD consultant.

Alfredo Revilak, has a doctor of science from the School of Engineering and Applied Sciences at the George Washington University (2006) (concentration: innovation), a masters in computer science from the University of Arizona (2001) and a bachelors in computer engineering from the instituto.

Susana Rodrigues. PhD in Strategic Management by the university of Wolverhampton, United Kingdom. Member of Research Centre for Management and Sustainability and member of the Research Centre for Rapid Sustainable Product Development. Regional editor for Europe for the Journal of Global Business and Technology. Consultant in the strategic management area. Lecturer in several Master degree programmes. Senior lecturer in strategic management.

Arturo Rodríguez-Castellanos. Plain Professor of Financial Economics at the University of the Basque Country (Bilbao - Spain). Head of the Department of Financial Economics II of the University of the Basque Country. Member of the Royal Academy of Economics and Finance of Spain. Vice-President of the European Academy of Management and Business Economics (AEDEM). Coordinator of the Research Group on Financial Valuation of Business Intangibles (VALINTE). Coordinator of the University Multidisciplinary Group on Advanced Management, Knowledge Management and Public Governance of the University of the Basque Country. Author or co-author of several books and more of eighty articles in scientific journals and chapters of scientific books. Her main research interests are in General Financial Management, International Financial Management, R&D Management, R&D Transference, Intellectual Capital Analysis and Intangibles' Financial Valuation.

Francesco Rogo . Degree: Computer Science Engineering "La Sapienza" University. Since 01-2000, I have worked for 7 years in Marconi Mobile (Tactical Communications), In 12-2002, M.B.A. in Business Engineering at "Tor Vergata" University; In 09-2006, I've joined Finmeccanica Corporate (Product Policy Department); Since 10-2008, PhD Student in Knowledge Management at "Tor Vergata" University.

Don Ropes is a research fellow at the Centre for Research in Intellectual Capital where he looks at the role of knowledge management in organizational development. The focus of his research, and PhD dissertation (which he is currently writing at the University of Amsterdam) is on how communities of practice can be successfully cultivated as organizational development initiatives.

Iain Russell has led the professional team at the Scottish IA Centre for five years and is experienced in the strategic management of an Intellectual Assets Business Support Centre to achieve high performance results. He has a first degree in Economics and Politics, a post-graduate Diploma in Management Studies and a Masters Degree in Management Learning. His publications include articles with Jane Waters and

Fiona Jackson in The Journal of Intellectual Capital and he has spoken on Intellectual Asset Management at conferences around the world.

Giovanni Schiuma is associate professor at the University of Basilicata, Visiting Research Fellow at the CBP at Cranfield School of Management and Adjunct Professor at the Tampere University of Technology Management.. His primary research interests focus around the following areas: knowledge asset & intellectual capital management, performance management systems, innovation and change management, organizational learning. His work is published in refereed journals and books.

Sven Erik Skoenberg. Graduated at the University of Oslo as Magister Artium in urban and rural sociology. Post graduate studies at Nuffield College, University of Oxford. External examiner in pedagogy and philosophy. Special advisor Ministry of Finance Norway working on the Norwegian medium-term national programme (topics education and research). Visiting lecturer at universities and conferences in Scandinavia, Europe and USA. At present senior researcher Ostfold Research.

Francesco Sole is a Phd student at the University of Basilicata, since 2007. His main fields of research concern performance measurement and management, intellectual capital management, knowledge intensive services, systems thinking methodology. His work is published in refereed journals and books

Jukka Surakka PhD, head of research, Arcada-University of Applied Sciences, Jan-Magnus Janssonin aukio 1, 00550 Helsinki, Finland PhD , Kuopio university, Finland (2005), Researcher at Social Insurance Institution of Finland 1996-2003, senior researcher at National Public Health Institute in Finland 2004-2006, head of research at Arcada, University of Applied Sciences 2006 Research interest: Social Capital, citizen participation, rehabilitation (Multiple Sclerosis, Cerebral Palsy, disabilities), occupational health, stress, preventive medicine

Larysa Tamilina. Bremen International Graduate School of Social Sciences, University of Bremen.. PhD candidate (since October 2006). Research in Transformation of the Modern Welfare States.. Dissertation title is The impact of welfare state development on social trust formation: re-specifying the crowding-out hypothesis..Her Education has been CEPS/INSTEAD, Luxembourg & KU Leuven, Belgium, 2005 - 2006 (Master in socio-economic policy analysis), Odessa State Economic University, Ukraine, 1994 - 1999 (Master in Finance and Banking).

Daniel Trejo-Medina, Mexican, he is a Management PhD student at the Universidad Anáhuac México Sur, holds MBA from Escuela Bancaria y Comercial Mexico, and management specialization from Columbia University NY, he is Computing Engineer with honors rolls from UNAM. Has more than 15 years experience working in Latin America countries with actual focus, expertise and practice in Knowledge Management and Collective intelligence.

Hovhannes Vahanyan Graduated Yerevan Economic State Institute, Armenia in 2003. Highest degree obtained M.A. From 2005 – 2008 Ph.D. student at the Academy for Public Service under the President of Russian Federation (Moscow). Degree/Specialization: Management (Intellectual Capital and Knowledge Economy), additional highest degree obtained M.A. - Pedagogical for High School. Years of experience: 2001-2002 E-learning and Basics of E-business, trainer, 2000-2001 IATP/IREX Small Grant Program (supported by US State Department, BECA), "Electronic Library" project manager (Yerevan State Academy of Fine Arts). 1998-2001 responsible for multimedia educational courses program, granted by the Ministry of Education and Science of Armenia (N 9, 1.07.1998), Center "Search". Author of 16 scientific and research articles, coauthor of two books.

Belen Vallejo-Alonso As a Lecturer in Financial Economics at The University of the Basque Country, her research activities are oriented towards the fields of financial management, portfolio management, firm valuation and the financial valuation of intangibles. She is Author of numerous articles in scientific magazines and Lecturer of the Master in Finance of The University of the Basque Country. She is Member of the Editorial Board and Evaluation Board of some scientific magazines.

Campbell Warden is an accountant, translator and international research administrator. He has a Master in Conference Interpretation (1992) and an MBA (1999-2002). He has been employed by the Instituto de Astrofísica de Canarias since 1983; between 1998 and 2001 he worked as a Detached National Expert (on behalf of Spain) at DG RTD and from 2000-2002 he served as the President of the European Association of Research Managers and Administrators. He regularly serves as an external expert and evaluator to the EC and has organised and participated in management training courses for over 15 years.

Claire Wei is a lecturer in the Finance Department at Ming Chuan University and a Ph.D candidate in the Management Science Department at National Chiao Tung University of Taiwan. Her research interests are behavioral finance and the application of financial econometrics

Maria Weir: Operations Manager of the Intellectual Assets Centre in Scotland, and has played a key role in the Centre's development. Maria's areas of research interest include partnership development and performance management. Her recent work has focused on the development of intellectual asset management among Scotland's business community, as well as being a key member of the team responsible for establishing the Intellectual Asset Centre as a leading international think-tank in the field of IA research.

Piotr Wisniewski is Associate Professor of Corporate Finance at the Warsaw School of Economics. In 2002, he completed a doctorate on venture capitalism in a knowledge-based society: diffusion of high technologies and intangibles, corporate governance standards, foreign direct investment and systemic barriers to venture capitalism in Poland and Central Europe.

Inge Wulf, Clausthal University of Technology, Department of Business Administration, Chair of Accounting, D-38678 Clausthal-Zellerfeld; E-Mail: inge.wulf@tu-clausthal.de Since Sept. 2008 Professor of Accounting at Clausthal University of Technology; 2006-2008 Acting Chair of the Accounting Department, Technical University of Clausthal; 2001-2008 assistant at the University of Oldenburg, Department of Accounting; 2001 Doctor of Economics with research about „Hidden Assets in Financial Statements according to IAS/IFRS and US-GAAP“. Main research fields: International Financial Reporting, Financial Statement Analysis, and Intangibles in Business Reporting and Management Information Systems.

Pitipong Yodmongkon received the master degree in International Management in 1998. He is currently a full lecturer at Knowledge Management Department, the College of Arts Medias and Technology, Chiang Mai University, Thailand. His main research interests include intellectual capital, intangible cultural heritage and knowledge management. His previous research (joined with colleagues) was "Towards Formulation for Policies and Mechanism of Preservation, Transmission, and Protection of Intangible Cultural Heritage (ICH) and Traditional Cultural Expressions". The research submitted to the National Culture Commission in Ministry of Culture, Bangkok, Thailand in 2007.

Behrang Zadjabbari graduated in industrial engineering and got his master in MBA. Currently he is PhD candidate in Business Intelligence Institute in Curtin University in Australia. His main areas include sustainable business performance, strategic management and human resource management. He is working on intellectual capital roles in business performance and sustainability of the business in the future and has published several papers in these issues in top conferences. In his PhD, he introduced a new model on the basis of the trust & knowledge to measure intellectual capital. Currently, he is working on a framework to develop his model and to integrate it with current MIS systems such as ERP.

IC: Ready to Cross the Chasm?

Mary Adams¹ and Henrik Martin²

¹Intellectual Capital Advisors, Winchester, MA, USA

²Intellectual Capital Sweden AB, Stockholm, Sweden

Abstract: Awareness of the concepts of intellectual capital (IC) measurement and management continues to grow world wide. Many organizations have become early adopters of the “technology” of IC. Yet, after more than ten years of development, the field is still not widely known or understood in the mainstream business community. In his bestselling book, *Crossing the Chasm*, Geoffrey Moore explains a fundamental challenge for marketers of new technologies: the chasm between early adopters and mainstream buyers. Early adopters are willing to take risks and make fundamental breakthroughs. Mainstream buyers, in contrast, seek incremental, measurable improvement and a complete product. This paper tells the stories of eight companies from around the world that have used the IC Rating™ intellectual capital assessment (ICR) as part of their management strategies. The stories were developed based on interviews of the key manager who championed the assessment. The goal was to understand why they engaged in an assessment as well as the nature of the findings, what kind of changes the findings inspired and the results from the process (both financial and non-financial). The companies where these managers work are spread across Europe, Asia and the Americas. They include small, private companies; strong, middle market organizations and divisions of the largest multinationals in the world. Different industries are also represented: non-profits, manufacturers, technology and service companies. Despite this diversity, many of the same themes were repeated in the interviews of each manager. It was also clear from these stories that the eight managers interviewed all exhibit the characteristics of “early adopters,” as defined by Moore. They each had a strong vision, were willing to fight to sell this “technology” internally. Most felt that the process of evaluating their IC had been extremely positive, even transformational. However, they still have difficulty identifying a clear link between IC and financial results. This still-imperfect link between IC technology and financial results shines light on the chasm between today’s early adopters and tomorrow’s mainstream buyers. Financial results are a key interest of the mainstream buyer. In order to “cross the chasm” and move into the mainstream, the field of IC will need to do a better job of identifying and documenting the link between intellectual capital and financial measurements.

Keywords: Intellectual capital assessment, Intellectual capital management, crossing the chasm, case studies

Human Capital Management, What Does it Really Mean?

Fida Afiouni

American University of Beirut, Lebanon

Abstract: The use of the term human capital management (HCM) is quiet frequent today among scholars and practitioners. In many schools of business the human resource management (HRM) course has been replaced with human capital management and many companies have adopted the title chief human capital officer (CHCO) as a replacement or in supplement of the vice president of HRM. In sum, HCM seems to be replacing HRM or, at the best, is used with it interchangeably. What have triggered this change are the proponents of the knowledge-based view, inspired by the characteristics of our global, information and knowledge based-economy that consider people with their knowledge, experience, education, personality and behavior as a source of competitive advantage. However, despite the increasing use of the term HCM, there is some conceptual confusion as to what constitutes human capital (HC), and a greater confusion as to how to manage it. When I was first asked by one of my students what was the difference between HCM and HRM, I had a hard time giving him a convincing answer.

It is well known that the roots of human capital lie in economics rather than management theory. The concept of human capital was initially formulated by Nobel prizewinner and economist Theodore Schultz in the early 1960s when it was used as a way of explaining the advantages of investing in education on a national scale. During the last 50 years, other economists have taken up Schultz's definition of human capital many times and extended it in various ways, including measuring criteria, which led to the concept's greater heterogeneity. Currently, there are a variety of definitions and ideas associated with the human capital concept in a variety of disciplines, which leads to an even greater confusion as to what human capital management really means. Thus, the purpose of this paper is to review the HC literature since its inception, examine the various economic and managerial definitions of HC, and propose our own HC definition in an attempt to clarify the human capital management concept.

Keywords: Competitive advantage, Intellectual capital, knowledge-based view, Human capital, human capital management, human resource management

Strategic Planning of Intangible Resources (SPIR)

Carmen Agüero¹ and Arturo Vasquez²

¹Centro de Estudios en Prospectiva y Cátedra de Prospectiva Política y Tecnológica, ITESM Campus Monterrey, Nuevo León, México

²The University of Texas-Pan American, Texas, USA

Abstract: Knowing and managing intangible resources is essential for the company to succeed in today's global competition. Yet, often companies either don't know their intangibles very well or do not use them strategically in support of what the company pursues in the markets. In today's highly competitive markets, it is imperative that companies 1) develop enough knowledge on intangible resources and 2) apply strategic management to their intangible resources in order to obtain superior financial performance as a result. In addition, companies should be able to generate databases that allow for the management process of intangibles to be secured in the long run.

This study attempts to provide a supported rationale of why companies need to develop the appropriate knowledge and pursue the practice of using intangible resources within a strategic framework. Our approach focuses on planning strategic intangible resources with the purpose of identifying the intangibles that are needed in the development of innovative projects. In addition, the Strategic Planning of Intangible Resources (SPIR) allows firms to measure the value of existing and future resources, not only the existing or past ones as in the old approaches. The firm should be able to apply a measurement method for resource utilization. Over time, the approach can generate a database of intangible resources and facilitate a framework of knowledge management (KM), which can be grounded in an inventory of knowledge (and other intangible) resources. The database may provide a base line for future plans.

This paper also proposes a parsing of diverse intangible resources that can be applied to a technological platform of information technology for management and planning purposes. The approach involves data collection in an ongoing and permanent fashion, and the management of the intangible resources in all areas of the company with focus on human capital, structural capital and relational capital. Such capital should be planned for use at the right time and for the right target.

Keywords: Intangible resources, intellectual capital, strategic planning, firm competitiveness

Measuring the Impact of Research Networks in the EU: Value Networks and Intellectual Capital Formation

Verna Allee and Oliver Schwabe

Value Networks LLC, San Francisco, USA

Abstract: Intangible asset management has largely focused on valuation of intangible assets rather than conversion strategies. Value conversion is the act of converting one type of value (financial or non-financial) into another form of negotiable value. Without a thorough understanding of how intangible assets are effectively accumulated and deployed, static valuation measures have limited practical value. Value Network Analysis (VNA) has been successfully deployed in many different types of organisations to address strategic and operational issues, including intangible asset growth and utilisation. It is not a valuation method, but it is an integrative modelling language that readily links to other business performance models, including intangible asset monitors. The method coherently links indicators from strategic macro models down through the levels process, technology and data integration. An empirical study in 2007 demonstrated that VNA is a useful method for describing intangible value conversion at a macro level. This research was an evaluation study for the European Commission to better understand the impact of research networks on Intellectual Capital formation and competitiveness in regions. At the levels of organisation, network, and region, value network patterns were linked to specific patterns or 'thumbprints' of anticipated Intellectual Capital formation. The practical implication of this work is that it provides a possible solution to one of the most challenging business issues in the intangibles economy: describing and monitoring the role of intangibles in value creation. Many acknowledge that approximately 80% of a company's value lies in intangibles, yet practical methods for managing intangibles are not widely used. This problem is especially intense in government, civil society and non profit organisations, and networks. In these cases value impacts are exceedingly difficult to describe in only tangible or financial terms. VNA offers a scalable method for understanding the dynamics of intangibles and value creation at virtually every level of complexity from shop floor to regions and global networks.

Keywords: Value networks, intangible value, value conversion, Intellectual Capital, regions, intangibles

Pictures of Knowledge Management, Developing a Method for Analysing Knowledge Metaphors in Visuals

Daniel Andriessen¹, Eja Kliphuis¹, Jane McKenzie², and Christine van Winkelen²

¹INHolland University of Applied Sciences, Hoofddorp, The Netherlands

²Henley Business School, University of Reading, UK

Abstract: Knowledge management (KM) is difficult to pin down. It means different things in different organisations. The deliberate use of metaphors has been used to communicate what KM is about. This metaphorical communication can be even more enriched using visual as well as language mechanisms: "a picture paints a thousand words" suggests we can capture more resonances of a complex subject like KM through visuals than through a description alone. In addition, visuals are perceived to transcend the limitations of language, which can be an obstacle to communication. Yet, no method currently exists that we can use to identify KM metaphors used in visuals. This paper describes a search for a method to analyse metaphors used in visuals about knowledge management. The objective of the search was threefold: 1) identifying new metaphors for KM in visuals that can enrich KM theorizing, 2) developing a way to identify which visuals are the most powerful in communicating KM theory, and 3) improving the use of visuals as a way of assessing students studying KM. The paper concludes that analysing metaphors used in KM visuals is possible using a method that focuses on the dominant metaphors in a visual.

Keywords: Knowledge management, intellectual capital, visuals, metaphor, analysis

In Search of Alternative Metaphors for Knowledge; Inspiration from Symbolism

Daniel Andriessen and Marien Van Den Boom

INHolland University of Applied Sciences, Hoofddorp, The Netherlands

Abstract: Conceptual metaphors play a vital role in our ability to think in abstract terms like knowledge. Metaphors structure and give meaning to the concept of knowledge. They hide and highlight certain characteristics. The choice of metaphor when reasoning about knowledge is therefore of vital importance for knowledge management (KM). This paper explores the possibility of introducing new knowledge metaphors to the field of KM. Based on a 'wish list' of characteristics of knowledge they want to highlight, the authors choose to explore the *Knowledge as a Journey* metaphor as a new metaphor for knowledge. This results in new insights regarding knowledge sharing, acquisition, retention, and innovation.

Keywords: Knowledge, knowledge management, metaphors, symbolism

Financial Valuation of Intangibles With Real Options: Is a Real Option?

Gerado Arregui-Ayastuy, Belen Vallejo-Alonso, Arturo Rodríguez-Castellanos and Domingo García-Merino
University of the Basque Country, Bilbao, Spain

Abstract: The major role of intangibles resources, in particular knowledge-related resources, in generating competitive advantage and creating value in business, together with the evident limitations of the information provided by the stock markets, has, from the 1990s on, stimulated research into the identification and evaluation of such resources in companies. As most attempts to implement intangible valuation models have been made in large firms, research into valuation methods and models applicable to small and medium enterprises has been to a great extent neglected. Likewise, little work has been done on comparing the potential for the practical application of the methods developed, when the need to establish their validity and applicability is quite evident.

This situation moved us to produce the present report, designed to verify the degree of applicability of the method of financial valuation developed by Rodríguez-Castellanos et al. (2006a, 2007) for real options of intangible valuation in the Basque region of Spain. In our view, this study makes a relevant contribution to the literature on the valuation of intangible resources. As far as we know, it is the first paper to verify the practical utility of a financial valuation method for intangible resources that includes the possibility of valuating the real options associated with it, by directly asking CFOs from a representative sample of firms for their opinions. Furthermore, rather than choosing companies from a single sector or specific technological area, the companies canvassed worked in all industries and varied widely in size, which enabled us to make comparisons differentiated by size and sector. From the results it is clear that the method may be directly applied only in a few of the companies considered, as just one of every five firms was capable of identifying intangible-related options and approximately half of these were not in a condition to provide estimations for some of the necessary inputs. Fewer evident difficulties in applying the method were found in large companies, which usually devote more resources to identifying and analyzing their intangibles. In other cases, a preliminary phase of analysis and diagnosis would be required before the method could be applied practically.

Keywords: Real options, intangibles, core competence, financial valuation, intellectual capital, intangible valuation

Alignment Between the Business Strategy and the Software Processes Improvement: A Roadmap for the Implementation

Regina Asato, Mauro de Mesquita Spinola, Ivanir Costa and Walter Henrique de Farias Silva
Paulista University, São Paulo, Brazil

Abstract: Currently, Information Technology (IT) has a strategic role in organizations. In order to be competitive, software companies need to invest in improving their software procedures. However, some companies delay or postpone investment in the improvement of software procedures due to misunderstanding on how such implementation can be successful. For this reason, the strategic alignment is fundamental for the investments in improving processes of software are perceived by effective results in the organization business objectives. Recent surveys show that a success factor of investment in information technology is the alignment between IT and organization strategies for competition. Therefore, the actions for the improvement of the software products and processes, for a better achievement of the organization business objectives, must be related to competitive market strategies. This paper describes the process of developing a roadmap for the support planning and implementation of the strategies of software companies. The roadmap allows to interpret of strategic objectives, to model performance indicators and to analyze the investments in processes of software. The Balanced Scorecard (BSC) and the Practical Software Measurement (PSM) are the basis of roadmap proposed in this paper. The BSC is a management system based on indicators that are driving performance, providing the organization business vision, present and future. The model PSM defines formal the measures to be used and how to conduct the measurement process. Based on these grounds the roadmap basis was developed. This roadmap has been evaluated and improved through action research, developed in a specialized software company in financial segment. The implementation of the methodological stages resulted in the definition of strategic map and its development studied in the organization. The capacitance in management requirements has been prioritized as an action-plan to minimize the lack of definition of scope identified in the process. The final outcome of this study is a roadmap which allows the implementation of strategic alignment of business and the improvement of processes in software companies. The approach strategy to apply action research has enabled the refinement of the proposed roadmap, the learning of the participants and the improvement of the application of method itself. The application of the action research also stimulated the team's commitment. The active participation of stakeholders was fundamental to finalize this study and obtaining the results. The proposed study showed that the investment in management requirements training leded directly to the increase of the organization billing. This way, has registered how investments in intellectual capital relate to the strategy and the performance of the company.

Keywords: Business strategy; software processes improvement; BSC; PSM; action research

The Role of Corporate Wellness Policy in Developing Intellectual Capital in a Paper Factory

Ossi Aura¹, Guy Ahonen² and Karl-Erik Sveiby²

¹Elisa Corporation, Helsinki, Finland

²Hanken School of Economics, Helsinki, Finland

Abstract: In an Intellectual Capital (IC) framework, the role of a Corporate Wellness Programme (CWP) was studied from a multidisciplinary approach in a paper industry company of 350 employees. In eleven years follow-up setting, the associations of physical activity, smoking, self assessed working ability, perceived health, sick leave days, body mass index, CWP participation activity, company climate, job satisfaction and motivation were studied in respect to the company's CWP-policy. Different standardized questionnaires were utilized in the data collection. Also qualitative methods were applied in evaluating the CWP-policy in relation to IC. In a cross-sectional and follow-up setting, several findings with respect to IC were made regarding physical activity in general and activity in CWP in particular. Findings were relatively strong concerning Human Capital, indicating that health, wellness and work efficiency related indicators are positively associated with physical activity, while other life style patterns were of minor importance. In respect to Structural Capital, activity in CWP showed positive associations with company climate, job satisfaction and job motivation. In the qualitative analysis, the importance of CWP was emphasized both by management and employees. In the paper industry, where the management's and employee's roles are traditionally more or less predetermined, CWP offers a good tool in developing Structural Capital. "Where else could I get to know the workers except in the volleyball field" says the CEO. Overall, CWP was seen to be an integrated part of Structural Capital, in addition to its important role in health promotion. The CWP was built in Case company with persistent management's support and professional inner marketing. With networking activities and fitness events these reflected positively in Case company's Relational Capital. Wellness matters were taken into account in recruitment procedures, which in turn effected on the quality recruits. The results indicate what role corporate wellness policy can have in developing a company's IC.

Keywords: Structural capital, corporate wellness, human capital, policy, participation, relational capital

Cultural Capital as a Driver for Performance in Higher Education

Schelte Beltman

Centre for Research in Intellectual Capital, Haarlem, The Netherlands

Abstract: This paper reviews how awareness of certain manifestations of organizational culture can enhance performance in institutions of higher education. Based on findings from PhD research on the identification of manifestations of organizational culture in relation to performance in higher education, and the work of for instance Scott (2002), Yokoyama (2006) and Becher and Trowler (2001) a classification of manifestations of organizational culture is made. This results in a framework, which encompasses manifestations of organizational culture in relation to performance within Dutch Universities of Applied Sciences. This framework is reviewed in the context of national policy documents on performance in higher education in general and universities of applied sciences in particular. Furthermore, the framework was analyzed by means of semi-structured in-depth interviews with employees of these universities and policymakers within higher education in the Netherlands, observations and a document analysis. By triangulating the data a picture of how manifestations of the organizational culture contribute to performance and in particular which manifestations that were revealed. The dawn of the 21st century has shed further light on higher education. The two main treaties (Bologna and Lisbon) of the late 20th century brought an unprecedented wave of change in higher education. The times when national and even local institutions and policymakers could establish their own strategies and policies in order to provide higher education appears to be over. The key words for higher education in this era are; diversity, flexibility, within a European framework, stimulating participation, knowledge production, sustainable social and economical environment and higher education as a global marketplace. All the external, environmental factors are affecting higher education. In total five manifestations of organizational culture were identified. In the light of the external pressure on HEIs one manifestation, collegiality, is further analyzed and appeared to be a strength in day-to-day operations of HEIs.

Keywords: Organizational culture, manifestations of organizational culture, collegiality, performance, higher education

Managing Intellectual Capital in Hungarian Universities – The Case of Corvinus University of Budapest

Viktória Bodnár, Tamás Harangozó, Tamás Tirnitz, Éva Révész and Gergely Kováts
Corvinus University of Budapest, Budapest, Hungary

Abstract: The quality of higher education is a key element of international competitiveness. The changes of higher education on the market draw the attention of Hungarian higher education institution to acknowledging the increasing role of knowledge resources. Responding to the recent changes, several European universities have begun to measure systematically their intellectual capital, but well-developed models – except the Austrian case – are still not available. Aiming to identify the main characteristics of measuring and reporting the intellectual capital we carried out a research in Corvinus University of Budapest (CUB) based on the method of document analysis and executive interviews. Our paper sets three research aims: 1) First, by examining and systematizing the practice of external and internal reporting system at CUB, we give an overview of the content and method of intellectual capital management of a higher education institution. 2) Second, we identify the existing information on the different element of intellectual capital found in the reporting. 3) Third, we examine the existence of such any integrated management and reporting method like the Wissensbilanz-model used by the Austrian universities

Keywords: Higher education, Intellectual capital, reporting

The Frontier of Linearity in the Intellectual Capital Metaphor

Constantin Bratianu

Academy of Economic Studies, Bucharest, Romania

Abstract: The purpose of this paper is to demonstrate that *linearity* is a major limitation of the metaphor *Knowledge as Capital*. This metaphor proposed by Daniel Andriessen as a challenging debate for ECIC 2009 has been extremely fruitful in promoting knowledge as a new field of interest in economic research and praxis. Since *Capital* is a core concept of any economic activity, using it as a semantic source for the newly coined expression, Intellectual Capital, proved to be a winning idea. However, any metaphor highlights certain things and hides others. There are some semantic frontiers in the source domain which constitute its limitations. The purpose of this paper is to analyse the *linearity* property of the source domain, and to demonstrate that it constitutes a major limitation of the IC metaphor. We begin with the mathematical definition of a *linear space*, and then we analyse how this definition requirements, which are fulfilled within the source domain, cannot be fulfilled within the target domain. We are interested especially in the following requirements of the linear space: *commutativity*, *associativity*, *distributivity* and the application of the *principle of superposition*. The *Knowledge* domain does not satisfy any of these requirements which means that the target domain is strongly nonlinear. Although many authors have used these concepts of *linearity* and *nonlinearity* in connection with knowledge and intellectual capital, none of them undertook a systematic analysis of the basic properties of linear spaces and how they fit within the knowledge field. Linearity is strongly related to the measurable property of the source domain, and this operational connection explains why many methods proposed to measure knowledge and intellectual capital failed to produce good results. We shall extend our analysis to *linear* and *nonlinear thinking* patterns, showing how the frontier of linearity can impair managerial decisions. We hope that our work will stimulate new research aiming at using properly the nonlinearity property of the *Knowledge* field.

Keyword: Capital, knowledge, linearity, linear space, linear thinking, nonlinearity

IC – based Inter-industry Variety in Serbia

Sladjana Cabrilo

University of Novi Sad, Novi Sad, Serbia

Abstract: This paper presents a wide-range research and analysis of intellectual capital in Serbian business environment. The primary research objective was to look at organizational intellectual capital within different industries in order to enable the fine-tuning of intellectual capital reporting according to particular industrial features. The role of intellectual capital value drivers in the process of intellectual capital reporting focused this research on identification of relevant intellectual capital value drivers, as well as the specific features of intellectual capital and knowledge flows within observed industries. The results have revealed some specific features of industries, thus indicating inter-industry variety from the perspective of intellectual capital.

This research should be viewed, first as a contribution to refinement of the existing intellectual capital reporting methods with respect to unique characteristics of the industries, and second as a case where the different stages of the evolution of intellectual capital between different cultures/countries is presented.

Keywords: Intellectual capital, intellectual capital reporting, intellectual capital value driver, industry, Serbia

Firms Attributes and Intellectual Capital Disclosure: Evidence From IPO Prospectuses in Taiwan

Yuan-Chieh Chang¹, Huo-Tsiang Chang², Hui-Ru Chi², Wen-Hong Chiu³

¹National Tsing-Hua University, Taiwan

²National Chang-Hua University of Education, Taiwan

³Asia University, Taiwan

Abstract: The paper examines the relationship between firm attributes (e.g., profitability, firm size and the share of stocks held by board of directors) and intellectual capital disclosure. Based on the framework by Guthrie and Petty (2000), three dimensions with 18 intellectual capital disclosure keywords were proposed. Content analysis was used to analyze the frequency, quality and compound indicators in 142 IPO prospectuses from 1992 to 2006. The results of regressions revealed: (1) corporate profitability is significantly positively correlated to the disclosure frequencies of external capital and human capital, but is significantly negatively correlated to the disclosure quality of human capital; (2) the corporate size in term of sales is significantly negatively correlated to disclosure quality of external capital; (3) but corporate size in terms of number of employees is significantly positively correlated to disclosure frequency and quality of overall intellectual capital; and (4) the share of company stock held by it's board of directors is negatively correlated to the overall intellectual capital, but not with statistical significance. The stock market administration can provide more support to guide the small firms and internal capital disclosure in the IPO prospectuses.

Keywords: Firm attributes, intellectual capital disclosure, content analysis, IPO prospectuses

Prioritizing Corporate R&D Capabilities: The Intellectual Capital Perspective

Yuan-Chieh Chang¹, Hui-Ru Chi² and Pei-Ju Yu³

¹National Tsing Hua University, Hsinchu, Taiwan

²National Changhua University of Education, Changhua, Taiwan

³Chuanghua Institution for Economic Research, Taipei, Taiwan

Abstract: Few researches have been undertaken to prioritize corporate R&D capabilities in the intellectual capital view. This paper synthesized a comprehensive list of IC-related indicators for developing corporate R&D capabilities along the input-process-result process. Via the factor analysis, 43 IC-related indicators were abstracted into 11 IC-related factors. Corporate R&D managers prioritized these IC factors by deploying analytical hierarchy process (AHP) questionnaires. The results of AHP revealed: (1) the result phase is the pivotal of developing corporate R&D capabilities in three phases, (2) the top three weighting factors are the relational and process capitals (cost effectiveness to customers) in the result phase, following by organizational capital (strategy fitness) in the input phase, and human capital (competency of R&D personnel) in the input phase; (3) strategy fitness is the most significant IC capability in the input phase; project execution capability is the most important IC in the process phase; and cost effectiveness to customers is valued the most in the result phase. Some discussions and conclusions were drawn.

Keywords: Intellectual capital; corporate R&D capabilities; input-process-result model, analytical hierarchy process

The Growth of Intellectual Capital: An Observation from the Organizational Lifecycle

William Chang¹, Jasper Hsieh² and Claire Wei¹

¹Ming Chuan University, Taipei, Taiwan

²GrNanhua University, Chiayi, Taiwan

Abstract: Extant research implies heterogeneity of resources has been a foundation for firm-wise competitive advantage. However accumulation of these resources is a continuous process. By taking an organizational life cycle perspective, this paper examines the dynamics of intellectual capital within DRAM companies in Taiwan.

Keywords: Organizational lifecycle, intellectual capital

Making a Difference: Employees as Social Capital Investors

Joy Chia and Margaret Peters

University of South Australia, Magill Campus, Magill, South Australia

Abstract: A 2008 Australian-Canadian credit union comparative study found that employees, as social capital investors, are making a significant contribution to their organisations and their members' communities. The qualitative, pilot study included 27 interviews with credit union employees. Through an interpretative analysis of employees' understanding of social capital and the relational context of that capital, findings point to employees developing and managing credit union's social capital as part of a *culture of social responsiveness*. As part of their mission statements, Australian and Canadian credit unions aim to assist those in need to stand on their own and to add value to their members' communities. This is part of their historical background as credit unions began in order to provide fair access to financial services for groups who were underserved by mainstream financial services. The study reported in this paper indicates that social capital investment and community engagement slowed down during recent mergers; this was especially evident in the Canadian credit unions. The economic slow down, and tight financial markets, also had an impact on credit union viability. But credit union employees were determined to re-engage with their communities, with an emphasis on social responsiveness as fundamental to their business practice. Credit unions in the study demonstrated a strong commitment to their members and their communities. In the context of this paper, where the focus is on applied research, social capital is used reflexively to refer to the investment of an organisation in community programs where employee involvement is central to the success of these programs. Social capital encompasses a broad range of concepts and understandings. It has perhaps been most widely written about by Pierre Bourdieu, the French sociologist who extended the idea of 'capital' to categories such as 'social capital', 'cultural capital', and 'symbolic capital'. In this paper, credit unions (the organisations central to the study reported here) are social arenas where struggles over certain forms of capital occur as employees, for example, determine that credit unions become more than financial institutions managing members' financial matters. When credit union employees engage with their members' communities and public relations and corporate social responsibility staff facilitate community partnerships, this paper contends that their role as social capital investors develops organisations' moral fibre and generates and develops organisations' reputation and character.

Keywords: Social capital, community engagement, employees, relationships

The Helix of Knowledge Management - Innovation - Competition on the Global Market

**Alina Mihaela Dima, Mihaela Prejmerean and Simona Vasilache
Academy of Economic Studies, Bucharest**

Abstract: The paper analyzes the relationship between the level of intellectual capital development and fraud by disregarding the provisions of the competition law. Large multinationals, which received fines for anti-competitive behavior, are studied in terms of their innovative practices, which may be premises of predisposition to fraud. Based on data from the Global Innovation Index, and from the EU Commission and USA Department of Justice Decisions for anti-competitive practices, we set the correlations, by means of probit regression, between economic fraud and innovation as a potentially influencing factor. Clusters of innovative companies, depending on their risk to commit fraud, are being proposed, in an attempt to examine the threats, as a counterpart of the largely discussed opportunities, of innovation.

Keywords: Intellectual capital, innovation, anti-competitive practices, multinational companies, fines

How can the Value of IT Personnel in SMEs be Assessed?

Verena Dorner

University of Passau, Germany

Abstract: Over the last decade, the importance of small and medium-sized enterprises (SMEs) to the European economy has gradually been recognized. At the same time, information systems (IS) and information technology (IT) have opened up new business opportunities for some SMEs, while others are fighting for survival. Apart from economic variables like company size, industry or capital funding (or lack thereof), management awareness of the dangers and opportunities posed by IS and IT and the abilities of IT personnel to react to these have been shown to play a major role in the future of many SMEs. Based on the empirical and theoretical findings by a variety of authors, this paper will propose a model for assessing the value of IT personnel in SMEs. First, the strategic context in which IS are deployed in a company must be addressed because it is a major determinant of the value of IS to the company and of the types and levels of skills necessary in its employees. The “focus-dominance model” developed and tested by (Levy et al. 2001) will be discussed and used to cluster SMEs according to strategic focus and customer dominance. Second, the “competitive advantage provided by IS” is proposed for measuring the success of IS in a company. The main advantage of using this measure is the fact that it has already been validated and used in an exploratory analysis by (Byrd et al. 2001) which strives to show how IS success is affected by IT personnel skills. The skills will be clustered using four dimensions: (1) technology management skills, (2) business functional skills, (3) interpersonal skills and (4) technical skills. (Lee et al. 1995) This framework has been used repeatedly in studies on IT personnel skills, e.g. by (Byrd et al. 2001), and therefore allows referring to said empirical studies. In addition to skill dimensions, skill levels – which have been neglected in much of the previous research on IT personnel skills – will be included in the model. The approach by (Dreyfus et al. 1987) and the Skills Framework for the Information Age (SFIA Foundation) will be discussed. It is expected that future empirical tests of the model will show that value and success of IS depend on available skill levels, while the availability of more highly skilled employees may be restricted due to lack of funding. When the model proposed here is tested empirically, it is hoped that it will provide some guidance to SME managers regarding their IS/IT personnel investments.

Keywords SME; information systems; IT skills; IT personnel; strategic planning

Transforming the Utility of IC Narrative: An Interventionist and Strategic Approach

John Dumay

University of Sydney, Australia

Abstract: The purpose of this paper is to examine, by way of a case study, the use of IC narrative in the development of a strategic plan for the Sydney Conservatorium of Music, a Faculty of the University of Sydney. The use of IC narrative in this case provides insight into the utility of IC to communicate the strategic intentions of an organisation and the initiatives required to carry it out. This paper makes a contribution to IC knowledge and practice by demonstrating how the utilisation of IC narrative in conjunction with an interpretive research approach in a particular organisation highlights the emic and etic interplay that is required to develop and articulate an IC strategy. Further, it provides an example of how value creation in an organisation can be communicated to its stakeholders and how the use of IC narrative transcends the use of contemporary accounting and IC reporting frameworks.

Keywords: Intellectual capital; strategy; interventionist research; narrative

The Meaning of Intangible Assets: New Insights into External Company Succession in SMEs

Susanne Durst and Stefan Gueldenberg

Institute of Entrepreneurship, University of Liechtenstein, Vaduz

Abstract: The Commission of the European Communities (2006) estimates in its report that one third of all EU entrepreneurs will leave within the next ten years. Combined with the situation that (1) the majority of Europeans prefer being an employee and (2) the changing demography will reduce the pool of potential successors over the next decades this paper argues that external (non-family) successors take on an important role and are in a position to choose the company, which best matches their expectations. A successful company succession is based on a multitude of different aspects. In the case of external succession the available funds represent a critical point. However, the assumption is that the decision for or against a company is based on other factors. It is hypothesised that the potential external successor will be interested in those companies offering potential expansions, which may, in turn, improve the likelihood of financial support. In view of the increasing relevance of intangible assets within the firm, it is suggested these assets primarily influence the external successor to go further in the succession process. Thus, it is expected that the future perspectives of the company are founded on its inherent intangibles and therefore justify a financial investment. The aim of this paper is to explore the role of intangible assets as seen from the viewpoints of external successors. The strategy of research behind this paper is the application of a mixed methods approach which is divided into a survey approach and a case study approach (given priority). Within the quantitative stage a web-survey is used to obtain data on the relevance of intangible assets in terms of external company succession in SMEs whilst addressing members of German trade corporations and chambers of commerce. The results of the quantitative study were enhanced through qualitative interviews with ten external successors in SMEs. The data which was gathered explores the role of intangible assets during their decision-making stage as to whether or not they should enter the company. Intangible assets are found to be important features for external successors. Specifically five intangibles can be highlighted: brand, partner(s), key-employees, knowledge retention, and corporate culture. The critical intangibles are summarised in a conceptual framework. The findings suggest that in the case of external succession, intangible assets have a remarkable influence on the external successor's decision-making and therefore traditional issues in the view of company succession such as tax, legal and, financial aspects should be extended to include intangible aspects.

Keywords: SMEs, intangible assets, company succession, strategic management

Social Capital and Economic Performance of SME's: A Case Study from Turkey

Feray Erselcan¹, Aziz Kutlar², Ekrem Erdem², Fatih Doganoglu³

¹Cumhuriyet University, Sivas, Turkey

²Erciyes University, Kayseri, Turkey

³Adiyaman University, Adiyaman, Turkey

Abstract: Perceived as a factor that influences the efficiency and effectiveness of key production factors in the process of economic development, social capital is defined in this study as the set of social relations that enable entrepreneurs to gain access to economic resources. The study presents findings from a sample survey carried among owners or managers of manufacturing small and medium sized enterprises (SME's) in Sivas, a province located in a rather less developed region of Turkey. In the World Value's Studies, Turkey is generally portrayed as one of the countries with a relatively low general trust. Given that there are almost no attempts to analyse its consequences at national and regional level, this study attempts to fill in this gap. Trying to find out what role social capital plays in SME's performance and which form of social capital (bonding or bridging) is much more relevant, particular focus is on how trust and business networks play a part in this performance enhancement process. In accordance with the above mentioned conceptual framework on social capital, we have used two sets of variables the first one aiming at measuring the tendencies of trusting behaviour among entrepreneurs, namely trust levels, norms and network, which we called the "*potential social capital*". On the other hand, the second set of variables which represents the economic effects of social capital and is called as "*actual social capital*" aims to measure what entrepreneurs actually do in terms of investing in networks or cooperate. These include positive benefits such as reduction in transaction costs, the extent of collective action and learning spin-offs. Trust levels are found to be generally low, institutional trust being the lowest, although most of the trust-supporting social mechanisms (such as norms and sanctions relating to cheating, business reputation etc...) do exist. In their economic transactions most of the entrepreneurs seem to be not depending on their close and strong ties. Most of the firms exhibit high transaction costs, low levels of cooperation with other firms in the industry, and rarely benefit from contributions of others including governmental supporting bodies and business associations. Our findings suggest that firms that enjoy higher levels of collective action and learning also perform better.

Keywords: Social capital, trust, networks, collective action, economic performance, Turkey

e-Knowledge, e-Learning towards e-Competence - The Development of a Model that Illustrates the Acquisition of Competences on Virtual Learning Environments

Sílvia Ferrão¹, Ramón Galván² and Susana Rodrigues¹

¹Polytechnic Institute of Leiria, Portugal

²University of Extremadura, Badajoz, Spain

Abstract: Tacit knowledge and competences are different names with similar meanings. Different names are due to researcher's backgrounds. The current study presents and clarifies the meaning of knowledge, competences, and learning. It draws an evolution of the concepts according to the different settings in which they emerge (managerial, academic and organisational settings). There is a growing research interest in acquiring competences on virtual learning environments (VLEs). VLEs have become popular. Virtual learning broadens access to knowledge and allows to learn anywhere at anytime at individuals' own space. It connects people, shortens distances among them, allows communication, and the sharing of knowledge. It is believed that interactive and collaborative online sessions can sustain a network-enabled learning environment by boosting discussion, exchange experiences, and sharing work. The acquisition of competences online is based on e-Knowledge and e-Learning. Therefore, e-Knowledge and e-Learning are tools to achieve e-competences. This research based on a literature review on learning systems (individual or organisational), develops a model that attempts to illustrate the acquisition of competences on VLEs. The acquisition of competences uses different learning tools, such as recorded classes, video conferences, simulators, software, CD/DVD, wikipedia, browsers, as well as different methodologies like self-study, team work and collaborative learning. As suggested by Mason (2005), learning and knowledge are strongly intertwined, and depend on the content, context and community. Knowledge helps us to learn. More individuals learn more knowledge they need as they became aware of their frontiers of ignorance. Knowledge and learning are a continuous growth loop that should be permanently adaptable to the world dynamics.

Keywords: e-knowledge, e-learning, competence, virtual competence, virtual learning environments, competences model

Internal Benefits of Human Capital Reporting - A Theoretical Appraisal

Ramin Gamerschlag and Klaus Moeller
Georg-August-Universitaet Goettingen, Germany

Abstract: In our knowledge-based economy the most important assets of successful companies are intangible in nature, for example an organisations' human capital. But only a few companies provide their stakeholders with detailed information about this resource. The reason is that they are not able to detect the value of the reporting in an adequate way. Nevertheless, Human Capital Reporting can be seen as a powerful instrument to affect an organisations' financial performance and to finally increase shareholder value. But how does the Reporting of Human Capital in detail affect a company's internal and external value drivers? What are the specific internal benefits and usages of such a reporting? Against this background a theoretical model will be developed. It will illustrate the transformation of the intangible factors of Human Capital Reporting to its' tangible outcomes. For this purpose the model considers the various cause-and-effect relations between Human Capital Reporting and company's financial performance. Similar to a Strategy Map, three dimensions with a specific number of different intangible factors will be developed. Finally, the model will show the value added of Human Capital Reporting. Along the way, this paper can be seen as a step towards an improved discussion about reporting and disclosure of intellectual capital in general and human capital in particular. Specifically the considered implications of an extended Human Capital Reporting on financial performance should lead to an increased debate about this topic.

Keywords: Human capital reporting, management accounting, intangibles, disclosure

Intellectual Capital and Financial Performance: Evidence from the Indian Banking Industry

Santanu Kumar Ghosh¹ and Amitava Mondal²

¹The University of Burdwan, West Bengal, India

²Kalna College, Kalna, West Bengal, India

Abstract: This study seeks to estimate and analyze the relationship between intellectual capital and financial performances of 70 Indian banks for a period of ten years from 1999 to 2008. Value Added Intellectual Coefficient (VAICTM) method is applied for measuring the value based performance of the companies. Financial performance measures used in this analysis are (1) return on assets (2) return on equity (profitability) and (3) assets turnover ratio (productivity) of Indian Banks. The intellectual capital (human capital and structural capital) and physical capital of selected banks have been analyzed and their impact on corporate performance has been measured using multiple regression technique. The analysis indicates that the relationships between the performance of a bank's Intellectual Capital, and financial performance indicators namely, profitability, productivity are varied. The study results suggest that banks' intellectual capital is vital for their competitive advantage.

Keywords: Indian Banks, VAICTM, profitability, return on equity, productivity

Measuring Innovation from the Source to the Value

Annie Green and Alfredo Revilak
The George Washington University, USA

Abstract: Intangible assets are creating most of the bottom line value in organizations in the current global competitive environment. Quantifying and valuing investments, sales and maintenance of intangibles has proven to be a difficult task for the 21st century organization. A core objective of intangible assets is the valuing of innovation, a key outcome of the knowledge worker and the business environment. Innovation does not just occur at the portfolio level, it is an evolving and dynamic process. Recent research on innovation measurement focuses on the results only, such as new products, services, statistics or methods. There is little to no focus on the process itself, because traditionally innovation does not have a 'systemic' approach; instead it is always associated with a disruptive process. A systemic approach to the identification, measurement and management of innovation is a complex venture. There are many insights associated with knowledge spills that occur in tandem with innovation that are of significant importance. These knowledge spills need to be surfaced and their impact on the value of innovation uncovered. This paper presents a theoretical model that identifies the path to innovation that minimizes waste (knowledge gaps) in the innovation process and thus enhances the value of the innovation using a systemic approach.

Keywords: Innovation, intangible assets, knowledge assets, intangible asset valuation, knowledge valuation

Mindsh@re in Finmeccanica: An Organizational Model Based on Communities of Innovation

Michele Grimaldi¹ and Francesco Rogo²

¹ University of Cassino, Italy

²FINMECCANICA S.p.A, Rome, Italy

Abstract: This paper presents the past, and ongoing, experience within the Aerospace and Defence (ASD) sector of how an advanced technology organization can create value innovation through the implementation of a knowledge management model, which is based on interdisciplinary communities involving external researchers, suppliers and also competitors. The aim of this paper is to analyze the empirical results of a challenging model of 'Communities of Innovation' (Col). MindSh@re is the so-called "meta-organization" that implements Finmeccanica's (the Italian ASD Company) technical knowledge network by utilizing all the available intellectual resources as a lever to promote "open innovation". MindSh@re is an extended organizational model aimed at adding value to the existing technological knowledge within the Finmeccanica Companies, the assessment of its knowledge resources and competencies, and at the sharing of best practices. It is designed with the goal of connecting people within a network and acting by multiplying the generation of new ideas, products, talent and is the engine for real value innovation through the "Technological Community", a flat organization which is aimed at providing focus and sharing research on those topics considered as leading industrial points of view. The resources involved in MindSh@re come mainly from the Engineering and Strategy Directions, with close ties to the Commercial, Marketing and Human Resources functions of the companies. This mix increases focus on targets, whilst at the same time, ensures innovative development and the growth of those resources committed to it. The present case study presents the model in the body of knowledge and depicts deeply its organization and philosophy. Three key elements are highlighted as being pillars of its success; people are at the core of this "engine", corporate management directly governs the project by assuring continuous alignment with business strategy and performance assessment, finally innovation emerges as a result of organizational knowledge.

Keywords: Organizational model; community of innovation; knowledge management for open innovation; industry case study

Knowledge Management for Small and Medium Enterprises in Developing Countries – Uganda: A Studio Based Approach

Annabella Habinka¹, Henk Sol², and Venansius Baryamureeba³

¹Mbarara University of Science and Technology, Mbarara, Uganda

²University of Groningen, Groningen, Netherlands

³Makerere University, Kampala, Uganda

Abstract: In developing countries, many Small and Medium Enterprises (SMEs) collapse at start-up, due to complex factors. Knowledge shortage and incomplete information are their key challenges as a result of obsolete technology and exposure. However, the Government of Uganda plans to establish nationwide knowledge service centres to serve as one-stop-shops in its Vision 2035 (CWS, 2007). These are meant to provide entrepreneurs with complete information with an aim of increasing survival rates and improving knowledge circulation. Viable solutions are at stake for developing countries due to their level of infrastructural development. However, to enable them to leap frog into the future, Information and Communication Technology (ICT) can facilitate their knowledge sharing. SMEs survival is determined by the amount of knowledge they have and how they manage it in decision making. This paper promotes the studio based approach as a practical solution to enable SMEs bridge knowledge asymmetric problems. This paper will benefit local communities in developing countries and the academic field. The studio will provide service sharing and decision enhancement to SME stakeholders and supplement techno-centric, social-cultural centric and access-centric Knowledge Management (KM) approaches. The problem this paper aims to answer is “What are the KM approaches available that can provide effective support to facilitate national and regional ICT-enabled knowledge service centres to act as one-stop-shops for improved knowledge sharing in the context of a developing country like Uganda?” The scope of this paper will entail a literature review of KM approaches. This will be achieved by exploration of existing information in key KM journals. This paper aims at providing a theoretical backup for the use of KM studio in Uganda’s knowledge service centers. As a result the KM studio will be a viable solution to SMEs in other developing countries.

Keywords: Knowledge Management, SMEs, Studio

Intellectual Assets and Small Knowledge-Intensive Business Service Firms

Robert Huggins¹ and Maria Weir²

¹Cardiff School of Management, University of Wales Institute, Cardiff

²Intellectual Assets Centre, Glasgow

Abstract: The increasing economic focus on knowledge has spurred the growth and development of knowledge-intensive business service (KIBS) firms. This paper focuses on how small KIBS firms manage their knowledge-based processes, or what we term intellectual assets, as part of their strategic management approach for creating competitive advantage. Intellectual assets are defined as recordable intangible corporate assets, including assets such as the name of a firm or organisation, reputation and goodwill, as well as brands, trade secrets, business processes and know-how. We develop a typology of intellectual assets consisting of organisational capital, network capital, and intellectual property. The methodological approach is novel in that it utilises the results of an online benchmarking tool allowing firms to gauge their intellectual asset base in comparison with other firms. Based on data from a sample of small KIBS firms located in Scotland, we find that approaches to the strategic management of intellectual assets varies significantly according to the size and type of KIBS firm. Differences in these approaches impact on the development of effective innovation processes, with resource deficiencies in smaller firms constraining their innovation capability. It is argued that intellectual assets are critical in securing competitive advantage among knowledge intensive firms. It is found that the relative development and accumulation (resource base), effective utilisation (value creation), and value (strategic importance) attached to particular types of intellectual asset varies considerably. Many firms have prioritised development and investment in ICT infrastructure and less so assets such as customer development, quality accreditation, and competitor intelligence. Overall, the inability to create value from intellectual assets, especially those relating to new product development, is restricting the development of effective innovation processes, with innovation more likely to be undertaken via less formal and systematic channels. New technology-based KIBS firms are less likely than their traditional professional service KIBS counterparts to have effective formalised learning systems in place, and generally operate within a more 'fluid' working environment. As well as sub-sector, firm size is strongly associated with the accumulation of intellectual assets. Smaller KIBS firms generally possess less resources related to both their organisational and network capital, as well as intellectual property such as patents, copyrights, and trademarks. Measures of absorptive capacity indicate that firms perceive gaps in their ability to assimilate and apply knowledge which they recognise to be of strategic importance. It is concluded that small KIBS firms face particular challenges in managing the innovation process and establishing sustainable knowledge management practices, and may benefit from targeted policy intervention.

Keywords: Intellectual assets; knowledge-intensive business services (KIBS); small firms; resource-based view; value creation; absorptive capacity; innovation

IC as a Developmental Tool for Municipalities

Elina Hyrkäs, Aino Kianto and Mervi Rings

Lappeenranta University of Technology, Lappeenranta, Finland

Abstract: The emerging literature on community-level intellectual capital has so far concentrated on the forerunners in knowledge-intensive areas. However, besides the cosmopolitan high-tech and creative hubs of the world, other cities and municipalities are facing many challenges that are related to knowledge-based issues. This paper examines the applicability and utility of the IC perspective for average municipalities, by inspecting four Finnish cases, and thereby widens the context of IC application for communities.

Keywords: Intellectual capital, municipalities

Identifying a Suitable Approach for Measuring and Managing Public Service Productivity

Aki Jääskeläinen

Tampere University of Technology, Finland

Abstract: Every public organization faces the challenge of improving productivity (ratio between output and input). In this effort, productivity measures are essential managerial tools. However, the issue of measuring service productivity has proven to be challenging. A key reason for the challenges seems to be related to the intangibility of services. It has been discussed a rather lot in the literature but there seems to be lack of understanding on how to capture this feature in practice. The objective of this paper is to find out how to measure the relevant elements of public service productivity in order to provide useful information for managerial purposes. The study is carried out by using qualitative research approach. Two tasks are carried out in order to push the topic further. First, the current knowledge is examined by reviewing literature on productivity and performance measurement. Second, an empirical examination is carried out in the context of four case services of the City of Helsinki, Finland. Several approaches of measuring productivity can be found in the literature. These approaches were evaluated in the context of the case services. In the case examination, several requirements for productivity measurement were identified. There is clearly a need for getting more detailed information on productivity affecting factors: measures should be designed for operative level units. Component-by-component approach was regarded as a suitable way for examining the complex measurement object of service productivity at the bottom level of an organization. In regards to the more technical measurement methods, the representatives of case services felt that matrix approach was the most suitable for their purposes. It was rationalized by the fact that matrix approach is easy to understand and it provides a powerful tool for operative management of productivity.

Keywords: Intangibles, performance measurement, productivity management, public services

How to Conduct the Audit of Intellectual Capital in Polish Tourism Business?

Elżbieta Maria Kot

Academy of Physical Education in Warsaw, Poland

Abstract: Intellectual capital (IC) - defined by the values such as knowledge, skills, experience, organisational, social and cultural relations etc. – is one of the most important assets of tourism business and can be perceived as the factor having the greatest influence on the company's value. Due to the leading role of intangible assets in tourism sector, it is important to specify the IC structure and diagnose IC assets for tourism industry. The results of the diagnosis should be taken into consideration in IC management and in the decision-making process within the organisation. The diagnosis of the IC condition is an issue which has not been the subject of any detailed research in Polish environment. The lack of specific tools as well as the real need for resolving the title problem has been the inspiration for a deeper investigation. The goal of the undertaken research is to create an algorithm of IC audit for tourism companies and necessary, utilitarian tools. The main objective shall be achieved by performing the research tasks presented in the paper, among which the most important are:

1. Review of the theory and different IC valuating and measuring methods (literature of the subject).
2. Executing the initial research among experts, executives and employees of tourism market, using an Individual in-Depth Interview (IDI) and participant observation methods.
3. Preparation of an IC audit's algorithm.
4. Programming a software of IC audit implementation.
5. Application of the IC audit prototype to an experimental group with the aim of eliminating any methodological and technical faults.
6. Implementation of the IC audit in chosen Polish tourism companies.
7. Presentation of the results (reporting).

The initial research has clearly indicated, that the knowledge resulting from an IC audit is useful and necessary for executives. Reporting of IC audit lets managers identify and highlight the missing or neglected elements of IC structure and recommends certain activities in management procedures, designed to enhance business performance. This paper presents the results of the research done so far, but the main goal is to implement the IC audit tool in Polish tourism companies and prove its efficiency.

Keywords: Intellectual capital, intangible assets, IC audit, management, tourism, Poland

Measuring the Effects of an IC Development Service: Case Pietari Business Campus

Paula Kujansivu and Antti Lönnqvist
Tampere University of Technology, Tampere, Finland

Abstract: Intellectual capital (IC) development includes a wide set of activities focusing on the improvement of an organisation's intangible resources. However, it is often unclear what kind of impacts different IC initiatives have. The current literature lacks appropriate methods for identifying and measuring them. If it is not possible to assess the impact of various development activities it is difficult to justify IC investments or choose between alternative service providers. This paper, based on a case study, examines how to assess the effects of an IC development initiative. The empirical research setting is the Pietari Business Campus, which provides various IC development services for its twelve member companies operating in the Saint-Petersburg area in Russia. In this paper, the literature is first examined to understand how the impacts of development activities can be assessed in different contexts. The characteristics of these approaches are then utilised to formulate the assessment methodology used in the case study. The empirical assessment consists of both objective indicator data on activities and outputs as well as subjective interview data on outcomes. The case study showed that the activities and outputs can quite accurately be measured but the outcomes are difficult to capture. The main challenge results from external changes taking place and making it difficult to observe the outcomes of development activities. Due to the challenging nature of the assessment task and the relatively low managerial priority of the issue it is suggested that subjective assessment methods may provide sufficient information in many cases.

Keywords: Effect, impact, intellectual capital, intellectual capital development, measurement, service

Solving the Value Conundrum of Knowledge and of Intellectual Capital in General

Philippe Leliaert

SyntaxisNetworking, Blaasveld, Belgium

Abstract: “To measure is to know”, yet it is paradoxical that where it concerns knowledge and creativity - arguably the key drivers in today’s ‘new economy’ - there is no consensus on how to measure, let alone value, these presumably valuable resources and activities. The realisation that a major part of a company’s market value could not be explained by its financial or physical capital lay at the root of the intellectual capital movement since the early 1990’s: Everyone “knows” that the combined intellectual assets (and liabilities) of an enterprise are increasingly critical in determining the health and therefore the value of the enterprise, if only because fewer and fewer enterprises rely on physical assets to do their business. Yet after almost two decades Intellectual Capital (IC) remains an elusive Shangri-La when it comes to providing generally accepted tools and techniques for identifying, measuring, reporting, and managing its value. This ultimately limits its usefulness for executive or managerial decision making. Using the case of knowledge markets, this paper exposes several shortcomings of the traditional transaction-based approaches that are typically used to determine the value of knowledge assets. It addresses specifically the limitations of ownership and appropriability, the significance of information asymmetry, and the need for authentication, all of which put downward pressure on the marketable value of knowledge. This goes to explain why knowledge markets cannot and should not merely mirror the dynamics of physical or financial markets. Key is to realise that the value of knowledge cannot be determined at the time of the exchange, and neither can its price! The act of sharing knowledge creates options on a continuum of future revenues. The value and price of knowledge should therefore be derived from whatever revenues it generates, as and when these are generated, rather than up front based on assumptions about future uses. Author proposes that knowledge markets be based on the ‘bee-keeper model’, an Open Source business model, separating the process of sharing knowledge from its commercial application, upon which its added value can ultimately be determined. By tracking shared knowledge all the way to where it leads to the generation of added value one can determine a claim on part of the related revenues to those who contributed to making them possible - by sharing their knowledge. These claims on part of future revenues can then also be traded as knowledge options.

Keywords: Intellectual capital; knowledge markets; value; options

Corporate Social Responsibility and Social Capital

Rosetta Lombardo

University of Calabria, Cosenza - Italy

Abstract: The recent corporate scandals remind us that, even if we adopt a narrow concept of managerial responsibility, there may still be serious difficulties associated with the effective institutionalization of this obligation. The actors of a firm have a common interest in ensuring its success. However, this common interest does not necessarily generate an harmony of individual interest. Collective action dilemmas arise among co-worker, supervisor and employee, managers and shareholders. Circumstances in which agents pursue their own interests at expense of principals is a clear manifestations of opportunism. Situations of opportunism, lack of trust and cooperation are real problems in firm/stakeholder relations. Broadening managerial responsibility may exacerbate the agency problems that arise between managers and shareholders.

Opportunism, lack of trust and cooperation are all obstacles to efficiency. When there are external effects, the interests of corporations and of society are not aligned: maximizing profits does not lead to the social good. Non-alignment can be often costly and damaging to the corporation. It is possible to reduce social conflicts and improve efficiency in two ways: increasing the quality of information and fostering trust, via formal institutions or via interpersonal relationships. Formal institutions are more expensive than interpersonal relationships and quite often they need to be integrated by informal institutions to be effective. Economists and moral philosophers since Adam Smith have observed that market economies operate far better where shared values of honesty and integrity prevail than where they do not. As North (1981, p.47) claimed: "strong moral and ethical codes of a society are the cement of social stability which makes an economic system viable". It can be helpful therefore to analyse the literature on social capital that focuses principally on interpersonal relationships.

In the past the challenge for corporations was to support process and design improvements and to increase their profits, the challenge of the future is to improve relationships in order to reduce and manage the most important risks. The paper tries to analyse what role social capital could play in the process of the diffusion of corporate social responsibility.

Keyword: Institutions; agency problem; social capital; corporate social responsibility

The Knowledge Management Role in Mitigating Operational Risk

Eduardo Longo

Synapsing, Sao Paulo, Brazil

Abstract: The idea that information and knowledge have become critical for value creation processes of companies and nations is now widely recognized. However, we must broaden this perspective and consider not only the potential benefits offered by intangible assets, but also the risks created by the mismanagement of the same assets. Otherwise, it will be increasingly difficult to manage the growing number of risks that can affect the results of a company. This theoretical paper discusses specifically the linkage between Operational Risk and Knowledge Management, aiming to improve the understanding of this subtle connection. After establishing this linkage, it is discussed which perspective should be adopted by Operational Risk Managers regarding information and knowledge. In short, these professionals should evaluate both: firstly, how information and knowledge create the possibility of operational risk events and, secondly, how they could be used to avoid these undesirable events. From this point, it is possible to define the focuses that Information Management and Knowledge Management practices could adopt to contribute to the mitigation of Operational Risk. This integrated perspective has the potential to benefit both Knowledge Management and Operational Risk Management practitioners. A Risk Manager will profit from a broader and more accurate understanding of many operational risk events. Even more important, this manager will also be able to deal with some causes of these risk events. This will launch a foundation for a better risk mitigation strategy, though, of course, risks cannot be fully eliminated. At the same time, a Knowledge Manager will profit from a clear and direct business driver linking Knowledge Management and risk mitigation, something that could potentially boost the return on investment of Knowledge Management initiatives. The paper also presents some real operational risk cases, considered from the Knowledge Management – Operational Risk Management integrated point of view presented in this paper.

Keywords: Knowledge management, risk management, operational risk, information, knowledge, risk event, risk mitigation

Environmental Capital: A Classification of Environmental Intangibles from Intellectual Capital

Dolores López-Gamero, Patrocinio Zaragoza-Sáez, Enrique Claver-Cortés and José Molina-Azorín
University of Alicante, Alicante, Spain

Abstract: Social pressures force firms to assume and face the environmental challenge through the development of new knowledge which can allow them to act following a sustainable development approach in the business environment. This new knowledge, related to environmental resources, practices and processes that firms put in motion is what we call *Environmental Capital* (EC). EC is often unknown both by the firm itself and by its *stakeholders*, because traditional environmental information dissemination methods fail to offer a faithful image of the firm. Thus, the need arises to look for alternative instruments that can complement them. A good alternative is represented by intellectual capital models, which offer a classification and, at times, the measurement of the intangible assets owned by the firm. The aim of this paper is to integrate EC into the overall intellectual capital approach. For this purpose, the *Intellectus Model* is taken as a reference in order to provide a framework from which it could be adaptable to the environmental context. EC would be the result of combining human EC, structural EC, and relational EC. The methodology used is the multiple case study applied to eight Spanish firms belonging to different sectors. The results indicated that, from the point of view of human EC, the firms analysed publish their environmental policy to show the extent to which they are committed to the environment, organise environmental training, information and awareness sessions and often attend seminars, sessions and workshops in order to obtain new knowledge related to this field. For structural EC, all the firms continuously introduce innovations and improvements in their environmental technology portfolio, basically formed by preventive practices; the creation of an environmental department, the appointment of a management representative and the existence of an environmental manager are the options taken by the firms examined. The analysis of relational EC reveals that primary and secondary sectors tend to involve suppliers in the environmental management process, whereas in the service sector, the customer is the most directly involved agent.

Keywords: Environmental capital, human environmental capital, structural environmental capital, relational environmental capital, case study

Capturing Competence – Using Wikis for Transferring Tacit Knowledge

Satu Luoma and Jussi Okkonen
Tampere University of Technology, Finland

Abstract: Most of a person's knowledge is tacit by nature and is difficult to externalize. In an organization, exploiting tacit knowledge is problematic but when it is done successfully it can increase the knowledge capital of the organization and make the decision-making process more effective. For example, transforming the tacit knowledge of an individual into knowledge that can be shared throughout the organization has a lot of potential. However, organizations often lack the methods of managing tacit knowledge. Transferring tacit knowledge requires a shared context and interaction. Could an information system act as a shared environment? The context of the paper is industrial maintenance. For supporting the integrated operation and maintenance there is a wide variety of different, more and less extensive information systems. Their main purpose is to capture the information needed in the integrated operation and maintenance and store it in one information system. Integrated operation and maintenance can be seen as a very knowledge-intensive process based on problem-solving. Therefore, sharing knowledge is essential and would improve the process. Information systems contain a lot of explicit knowledge which a person needs to absorb in order to turn it into action. However, tools for transferring tacit knowledge are missing even though the maintenance staff accumulates it constantly while working. In the paper we search for a solution to the problem of transferring tacit knowledge in integrated operation and maintenance using a wiki. Wikis have recently become a popular and handy way to create and edit knowledge and information using the Internet. One of the most well-known wikis is Wikipedia, which is surely familiar to all Internet users. The offspring of the paper is a general method with which tacit knowledge in integrated operation and maintenance can be transferred and shared within an organization using a wiki. The paper describes generally the functionalities and utilization of the system and the human-system-human interaction. The transfer of tacit knowledge is studied especially from the viewpoint of the smoothness and continuity of the operation. The method can be utilized extensively in the stages of different processes, for instance, for finding better solutions to fault situations and process development.

Keywords: Tacit knowledge, transfer of tacit knowledge, social media, wiki

Developing the Intellectual Capital in the Romanian Emergent Economy

Anca Mândruleanu and, Constantin Bratianu
Academy of Economic Studies, Bucharest, Romania

Abstract: The purpose of this paper is to present some of our research results concerning the developing Intellectual Capital in the Romanian emergent economy. The transition to the new economy requires some changes in the way a business operates. Unless they are aware of the challenges they have to face and find solutions to deal with such challenges, most Romanian companies will have a difficult time competing or even surviving in a dynamic, global business environment.

In Romania, strategic management and the proper administration of intellectual capital have been done in a very unstructured way. This paper tries to show the new dimensions of Intellectual Capital up to the organizational level and the new characteristics that Romanian organizations may have. In order to become intelligent organizations, the first step for the Romanian companies is to develop their Intellectual Capital and one of the main ways to do this is by changing the organizational culture. Effective knowledge management is supported by an organizational culture that will facilitate the creation, transfer, share and effective use of knowledge. Do Romanian companies have such cultures? Probably a positive answer cannot be done, except for very few companies. The creation of such cultures will be a very difficult task, since in many Romanian companies, the level of bureaucracy is very high. Although many companies sustain and encourage the idea of a participative management, often, the management of Romanian companies is strongly dominated by control, sometimes excessive and inadequately applied. Moreover, organizational learning, that is very important in a knowledge-based company, requires a culture based on free communication, teamwork and trust.

A creative organizational environment based on trust and that should stimulate the creative flow of knowledge is very important. Creativity means initiative, crossing of boundaries, taking risks and accepting mistakes as stepping stones to move forward. Unfortunately, this type of organizational culture is not well developed in the Romanian companies, thus creativity is blocked. The challenge is, therefore, to change the Romanian organizational culture into a stimulating and rewarding one. It is a very slow and rather difficult process but it should be done if the companies should survive in the coming future and to become competitive in a knowledge-based economy.

Keywords: Emerging economies, knowledge, intellectual capital, organizational culture

Intellectual Capital Management – SMEs Accreditation Methodology

Florinda Matos and Albino Lopes
ISCTE Business School, Lisboa, Portugal

Abstract: Intellectual capital management, as the main driver of organizational success, is now recognized by both the scientific and the business communities. The multidimensional nature of intellectual capital has led to the emergence of many definitions, which are often unclear. Thus, according to this paper, intellectual capital is an intangible element, resulting from interactions involving the expertise of each individual in the organization. This element is formed by the wealth of expertise of the employees, by their level of qualification, their experience, their level of information and by their readiness to evolve in the acquisition of knowledge - that is, by their individual talents. Intellectual capital management must verify if each individual is applying their knowledge for the benefit of the organization. In the case of small and medium-sized enterprises (SMEs), the problem of intellectual capital management appears to be more complex because, normally, it is very difficult to measure and manage intangible assets, which, combined with the scarcity of resources, undermine competitiveness. Therefore, it is necessary to create reliable and accessible tools in this field. Thus, intellectual capital management, in a form which is able to be audited and certified in order to control the quality and dynamism of the knowledge generated in the organization, will enable the partner organizations (customers, suppliers and lenders) to determine the capacity for innovation, and verify the conformity of their management parameters, compared to a reference standard. If we develop a methodology for auditing the management of intellectual capital, that can verify the sustainability of capital in companies, we can build the foundations of an accreditation system for intellectual capital management. Empirical research, previously concluded, identified a set of parameters for auditing intellectual capital management. These parameters confirmed the audit model - the Intellectual Capital Model (ICM). Based on the ICM, we developed a methodology that allows auditing the intellectual capital management. This paper summarizes this methodology and explains the benefits that may result from its application. It shows that the capacity for innovation, and its part in revealing the development degree of intellectual capital, can be audited in a credible way, using the parameters of the ICM. In conclusion, ICM can be an important tool for the assessment of organizational performance.

Keywords: Intellectual capital management, ICM, accreditation, innovation, SMES

InCaS: Intellectual Capital Statement. Measuring Intellectual Capital in European Small- and Medium sized Enterprises

**Kai Mertins, Markus Will and Cornelia Meyer
Fraunhofer IPK, Berlin, Germany**

Abstract: It is a common ground, that Intellectual Capital (IC) has become the critical success factor for enterprises operating in a knowledge driven economy. Especially for European small and medium-sized enterprises (SMEs) it is crucial to utilise and manage their intangible resources efficiently in order to obtain their competitive advantage, since they highly depend on specialised human, structural and relational capital for successful differentiation on the market. Therefore, the EU-project “InCaS: Intellectual Capital Statement – Made in Europe” has been designed to help European SMEs in detecting, analysing, managing and reporting their IC in order to strengthen their capability to quickly respond to market needs and thus, increase their competitiveness. As the main project result the “European Guideline for Intellectual Capital Statements (ICS)” has been published in November 2008 summarising the InCaS methodology that has been developed, empirically tested and enhanced during three project phases in close cooperation between IC experts, European business associations and 25 SMEs from five European countries.

Aiming at harmonising the different existing national ICS methods on a practical level suitable for SMEs, the InCaS research team discovered two main opposing approaches: While a quantitative measurement of intangible assets suits the requirements of external reporting as it can be standardised and compared more easily, it shares the problems of common balance sheets: standardised indicators and quantitative data can not display the individual business model and strategy in reasonable depth. Therefore, empirical evidence shows that little value for the management and development of IC can be drawn out of those solely quantitative approaches. Qualitative methods, on the other hand, aim at assessing the strengths and weaknesses of Intellectual Capital in regard to their future value, taking the individual business model and strategy of the single organisation into account.

The European ICS is an instrument to assess, develop and report an organisation’s IC, to monitor critical success factors systematically, and to support strategic management decisions. Supported by the software “ICS Toolbox”, the workshop-based approach of InCaS combines qualitative and quantitative methods in order to overcome the conceptual dilemma stated above. This paper will describe the InCaS method and implementation process as well as empirical findings from 50 pilot-implementations. The evaluation shows that the methodology has proven to be highly beneficial for internal management purposes allowing to derive specific actions for the well-targeted improvement of IC in the value adding processes of the company. Moreover, the standardised process and structure of the ICS report supports the communication of IC to external stakeholders, as well. If some basic quality requirements outlined in the European ICS Guideline are met, the method can also serve as a basis for comparability between different organisations. A quality assurance concept helps to ensure credibility and trustworthiness of the IC reports, especially for investors and banks.

Keywords: Intellectual capital statement, IC reporting, IC management, SME

Self-directed Team Models in Healthcare Settings: What is Their Potential for Adding Value to the Intellectual Capital of Healthcare Organisations?

Sue Molesworth¹, Rosalyn Beddows² and Helen Parker²

¹University of Keele, Keele, Staffordshire, UK

²North Staffordshire Combined Healthcare NHS Trust, Stoke on Trent, UK

Abstract: The concept of intellectual capital (IC) in organisations has been widely researched and its application is well understood, particularly in relation to business and commercial sectors. Despite the unique and vital role that healthcare organisations have in supporting the essential health and wellbeing of populations, awareness of IC and its implications may be underdeveloped in these organisations. Healthcare organisations rely on the expertise of a variety of medical, nursing, and other staff, thus optimisation of this human capital resource must surely be of interest to those that manage, fund, or direct policy in healthcare. Team working is a common feature of healthcare organisations, and it is of interest that a number of IC research papers have drawn attention to team styles in organisations. One particular mode of team working is that of the “self-directed team” model, and there is a substantial body of empirical research that describes the application of self-directed teams in various organisational settings. Within this body of research there are a small number of studies about the use of self-directed teams specifically in healthcare settings. The paucity of these studies and the diverse nature of methodologies employed in them means that it is difficult to generalise findings. This paper is premised on the idea that self-direction in healthcare teams is worthy of further exploration in order to determine whether self-direction is compatible with the expansion of intellectual capital in healthcare organisations. The aim of this conceptual paper is to propose a framework for describing the relationship between self-directed teams and intellectual capital in healthcare-specific settings. Drawing on a range of perspectives and examples from our own and others’ work, we explore the application of a model of team self direction in a healthcare organisation, and attempt to ascertain the value adding potential of self-directed teams to the organisation’s intellectual capital. We then outline some considerations for further research. Using an existing framework that describes IC in the healthcare sector we sketch out the elements we would expect to see in the IC landscape of a health organisation. We then critically examine both the potential contribution that the self-directed team model may make to the IC of healthcare organisations, and factors that might hinder the agency of the self-directed team model.

Keywords: Self-directed teams; healthcare organisations; intellectual capital; value adding potential

Academic Research Performance and Intellectual Capital Measurement System: Evidence from Italian Universities

Riccardo Palumbo and Daniela Di Berardino

Department of Business Studies, University of Chieti-Pescara, Italy

Abstract: the paper investigates the correlation between some indicators promoted in international experience of measuring the Intellectual Capital of universities and the scientific performance of these insitutions. This study uses data reported to the researchers of Chemistry of Italian universities (over the period 2000-2007) and integrates the results of peer assessment of first Italian Research Assessment Exercise (VTR) with bibliometric indicators. Relations between quantitative and qualitative research evaluation methods are underlined. The analysis shows significant correlations among size of university, financial resources, teaching load, mobility and scientific performance and suggests an integration of ICU report. Also, have been proposed some hypotheses about the possible conditioning of the Impact Factor on the peer evaluations.

Keywords: Academic research performance; research evaluation methods; intellectual capital; accountability; governance

High Education: Towards Development of Innovative Human Capital

Kalin Penev and John Rees
Southampton Solent University, UK

Abstract: This article discusses an activity based approach for teaching and learning applied in Higher Education to the development of Human Capital capability. According to the Leif Edvinsson, in one of the classic works in the area of Knowledge Management, Human Capital plays a significant role in overall Intellectual Capital. "... Intellectual capital is the sum of structural capital and human capital. Human capital refers to the knowledge, skill, and experience of the employees. Structural capital refers to the extension and manifestation of human capital. It includes tangibles such as the information technology systems, brand and company images, customer databases, organizational concepts and manuals." [Bucklew and Edvinsson, 1999] From other, social and economics points of view, Eva Gamarnikow and Antony Green summarised Human Capital thus: "In economic, capital refers to resources (whether financial or physical) that are used for the production of goods. It can also refer to all resources that bring in income. Social Capital and Human Capital are terms used in the social science to discuss analogous concepts with regard to social resources derived from social interaction (social capital) and individual development (human capital)." [Gamarnicow, 2003] For Higher Education in general, and for the development of activity based teaching and learning in particular, a comprehensive understanding of human capital is essential. Gamarnikow and Green clarify: "There are at least four ways of thinking about human capital. For economists, human capital has a specific, narrow meaning: It refers to the opportunity cost of individuals' or states' investing in education-forgone earnings plus the cost of education set against expectations of future (higher) earnings and economic productivity, respectively. At the other extreme, the term human capital is often as used merely as popular shorthand for education in general. The two intermediate perspectives are much more critical and compare the human capital approach to education unfavourably with other approaches. The first of these critical perspectives focuses on the social role of education. The other critical perspective focuses on the ways in which education operates at the level of the individual. It criticises the human capital approach for reducing education to the inculcation of marketable skills rather than taking a holistic approach and educating the whole person." As part of its strategic plans to support development of the Knowledge-based Economy, Southampton Solent University (SSU) aims to advance appropriate programmes of study. For this purpose an activity based approach for teaching and learning is in process of deployment at Faculty of Technology at SSU.

The article discusses definitions of Intellectual Capital, Human Capital, Social Capital, Knowledge Management and Knowledge, their interaction in the global information environment and in the particular context of Higher Education. It presents also the principles and design of an activity-based model for learning and teaching and relevant illustrations.

Keywords: Active learning, human capital, intellectual capital, social capital, knowledge management, knowledge

Social Capital in an Intra-organizational Higher Education Setting

Milly Perry

The Open University, Raanana, Israel

Abstract: Historically, the higher education system was the first knowledge economy. Today, though, it is no longer alone; it is but one knowledge industry among many. Academia is currently facing many challenges: new laws (intellectual property), competition, and internal challenges such as financial problems and technological learning. In order to meet the challenge of joint research that goes beyond the boundaries of institution, nation and discipline, the higher education system needs to take action to rationally manage both internal and external knowledge and capital. Universities must consolidate learning procedures, some of which exist and are based on the academic culture, and use all its social capital and "collective value of all 'social networks' and the inclinations that arise from these networks to do things for each other". (Putnam, 2000).

Keywords: higher education, social capital

Communities of Practice: Powerful Environments for Inter-organizational Knowledge Alliances?

Donald Ropes

INHolland University of Applied Sciences, the Netherlands

Abstract: The purpose of this research is to gain understanding about how communities of practice might serve as rich environments for generating knowledge alliances between members of different, and sometimes competing, organizations. Communities of practice (CoPs) are groups of people who come together in order to learn, solve organizational problems and innovate in their field. Knowledge alliances are an important way for organizations to increase their learning in order to innovate and remain competitive. However, knowledge alliances between competing organizations can be difficult to cultivate and are not always productive. This has to do with factors such as mistrust, problems with communication between unlike actors, and an inability to exploit knowledge gained from outside sources. The literature on communities of practice illustrates how these self-directed, practice-based learning environments can help overcome cognitive and motivational barriers to knowledge exchange by raising social capital among participants. However, most work on the subject employs an intra-organizational perspective; there is little research on how communities of practice work when participants come from different organizations. Understanding how CoPs can be used as mechanisms to help overcome specific barriers to inter-organizational knowledge alliances could aid organizations in improving their learning and consequently improve its capabilities.

Keywords: Communities of practice, knowledge alliances, social capital, and knowledge transfer

Business Model Evolution in IA / IC Support Centres and the Role of Market-Making

Iain Russell

Chief Executive Intellectual Assets Centre Glasgow Scotland

Abstract: This paper addresses some of the issues for 'migrating' the 'business model of IA / IC support centres depending upon the developing nature of their roles over time. It explores how centres may be sustained over a sufficient period of time to impact economically at a local, regional or national level. In state or project-funded centres it is sometimes difficult to maintain levels of funding over a sustained period of time due to the 'project' nature of many funding schemes. Indeed many of the initiatives in this field globally over the last 10-15 years have been noticeably transient. As a consequence the assets which might be created are not adequately transferred to more long-lasting bodies which might be able to exploit them further. To strategically manage a centre often means looking for business models which can sustain the work of the centre over a period of time longer than projects (in excess of five years) to create economic impacts. The paper therefore particularly reflects upon the role of such centres in market-making (or maybe more accurately market-proving) should such a role be envisaged for it. The rationale which may lead to the need to explore the making or proving of a market in IA / IC support is reviewed as well as the drivers for strategy adjustment which may lead to role changes for support centres. Roles which might bear market return as against those which are unlikely to have commercial returns are examined in the paper. The barriers to making changes in the business model are explored as well as the potential benefits for the users of such centres as well as their funders. The exit routes for the public sector are reviewed. The paper should assist in helping other centres with similar issues. The paper suggests further areas of research for scholars to help illuminate some of the issues which are highlighted in the paper.

Keywords: Commercialisation; market-making; Intangibles; Intellectual Assets; Intellectual Capital; Business Models

Developing Social Capital in a Regional Context

Sven Erik Skønberg¹, Per Kirkebak² Knut Aarvak¹

¹Ostfold Research, Fredrikstad, Norway

²Ostfold University College, Sarpsborg, Norway

Abstract: It is hard to find a country in the western world where the political driven strive for prosperity is not based on efforts to establish regional strategies "driven by knowledge" and "research driven clusters". In Norway a concerted effort is being made to take advantage of the EU's Regions of Knowledge initiative under the Seventh Framework Programme, the new Competitiveness and Innovation Framework Programme, and the structural fund. Propelled by funding from the Norwegian Ministry of Local Government and Regional Development and wheeled by The Norwegian Research Council's "strategic role" key worlds for achieving most needed financial support for regional research are "strategic use of R&D", "establishing clusters", "trippel helix", "competing on the global marketplace" – or more recently "sparkling points", "hotspots" and – if up to date - "the localization of the Creative Class". Simplistic but convenient models of understanding substitute the beauty of well formulated theories supported by empiric findings.

The focus of the paper is two projects addressing the conditions of regional innovation in Ostfold, Norway. Ostfold is one of Norway's 19 provinces, governed by a regional council, with five towns and a total population of nearly 250 000 inhabitants. The main core of the two projects is groups of actors defining their opportunities in a concrete context; the theoretical and methodological approach is action research and process theory. Establishing a regional strategy for Ostfold merge decision makers representing the interests of the regional governmental bodies, industry and working life, and the university and regional college on shared arenas, aiming at a learning process where the participants develops the ability to understand the different actors capacities and strategic goals – ultimately to test if there is a common ground for mutual collective action. The process is time consuming, depending on the actors themselves, the process within the group and how the work evolves. Establishing productive cooperation is building on the same premises although the focus is not regional strategies as such but concrete innovation in local businesses, sharing knowledge and resources across traditional business sectors.

Using the two projects as cases, the paper argues that regional research aiming at regional innovations in Ostfold must be based on strategies growing from the developing understanding of Ostfold's specific opportunities, supported by the meticulous work of empirical research addressing the opportunities of the actors, the available assets and the historical context in an ongoing learning process developing the social capital of the actors.

Rendering the regions innovative capacity in a narrative that envelopes and brings forward the collective strength of the regional government, the R&D institutions and the businesses acting together, is a basis for understanding the regions social and innovative capital and could be evaluated as *the IC of the region* if it meets the demands of management and reporting.

Keywords: Regional innovation strategies, regional innovation, social capital, action research, IC of regions

Mapping Intellectual Capital Dynamics to Identify Company's Value Drivers

Francesco Sole¹, Daniela Carlucci¹ and Giovanni Schiuma¹⁻²

¹University of Basilicata, Via dell'Ateneo Lucano, Potenza, Italy

²Cranfield School of Management, Cranfield, UK

Abstract: Nowadays knowledge assets are widely recognised as organisational resources which play a pivotal role in company's value creation. However the mechanisms through which these assets take part in value creation are not yet well understood. In particular, more actionable approaches and tools, able to disentangle the complex dynamics through which knowledge assets contribute to create value need to be addressed. This paper draws upon this need and proposes a model for identifying company's knowledge assets which significantly contribute to create value and for analysing how these assets, through cause-and-effect mechanisms, create value over time. The model is designed basically as a cognitive map and draws upon the combination of insights gathered from the strategic management literature, regarding the use of strategy and success maps, with the adoption of the Analytic Hierarchy Process and the Systems Thinking. The paper describes a practical application of the model in a construction firm.

Keywords: Knowledge assets, mapping, value creation, AHP, systems thinking, case example

Knowledge and the Ageing Employee: A Research Agenda

Christiaan Stam

INHOLLAND University of Applied Sciences, Haarlem, The Netherlands

Abstract: Our ageing population is the result of two demographic trends: decreasing fertility levels and higher life expectancy. As a corollary to these demographic trends, the working population is ageing and shrinking at the same time. This development will affect the performance of organizations in the next decades. As today's economy and the performance of organizations is mainly based on knowledge, the ageing workforce will mainly affect the organizations ability to be knowledge productive. As current knowledge management (KM) and intellectual capital (IC) literature hardly addresses the issue of ageing, the aim of this paper is to explore this topic in order to formulate an agenda for further KM/IC research. Combining the temporary consequences of ageing (brain drain and talent gap) and the false assumptions about the capabilities of older workers (older workers contribute negatively to a firm's performance), the current ageing of the working population reveals two main risks for organizations and management: underutilization of older employees, and loss of knowledge. Based on the exploration of these two risks in this paper, several issues are proposed for further research. These issues focus on the specific competences of the older knowledge worker, the implications for talent development programs, the benefits of inter-generational learning, and effectiveness of knowledge retention strategies. Today, the main fear is that large scale retirement will lead to a shortage of skills, talents, knowledge. Although acknowledging the risks and threats of this brain drain, the current temporary ageing of our workforce might also contribute to a structural better valuation of the potential of the older knowledge worker and its specific contribution to the process of knowledge creation. In an ageing knowledge economy, increased understanding about the abilities and distinct qualities of older workers will provide opportunities for organizations to enhance knowledge productivity and thus gain competitiveness.

Keywords: Ageing, ageing working population, ageing employee, older workers, knowledge productivity, knowledge management

Intellectual Capital of the European Union 2008

Christiaan Stam and Daan Andriessen

INHolland University of Applied Sciences, The Netherlands

Abstract: In 2004 the report *Intellectual capital of the European Union* was published (Andriessen and Stam, 2004). This report provided insight in the value of the intellectual capital of the 15 countries of the European Union, in relationship to the goals set by the European Council in March 2000. Since this report, the EU grew from 15 to 27 countries and the Lisbon goals were reformulated in 2005. The aim of this paper is to repeat the measurement of the intellectual capital (IC) of the *enlarged* European Union (EU) in relationship to the *new* Lisbon goals. In order to become the most competitive and dynamic knowledge-based economy, the EU decided to focus on “delivering stronger, lasting growth and creating more and better jobs” (CEC, 2005d, p.7). In this paper we translate this overall goal in 38 indicators. As the data was not available for all the new member states, we decided to limit our paper to the so-called EU-19. Based on our measurements we conclude that the EU-19 is still behind Japan and far behind the USA, however the EU is catching up as both Japan and the USA have considerably lower growth figures than the EU-19. From an IC perspective, the EU is geographically divided. The Nordic countries are still the best performing countries. The southern European countries and the new member states stay behind. However, as the new member states invest more in their IC, it might be expected that their positions will improve in the future. The aim of our paper was to measure the progress of the Lisbon Agenda for growth and jobs. Based on our measurements we conclude that the EU-19 is successful in terms of creating more and better jobs, but not successful in terms of delivering stronger, lasting growth.

Keywords: Intellectual capital, intellectual capital of nations, European Union, Lisbon strategy, measurement

Social Trust in Bilingual Communities in Finland

Jukka Surakka,¹ Markku Hyyppä,² Pertti Jokivuori³ and Pertti Saariluoma³

¹Arcada-University of Applied Sciences, Helsinki, Finland

²National Public Health Institute of Finland, Turku, Finland

³Jyväskylä University, Finland

Abstract: In Finland, members of the Swedish-speaking minority (5.6% of the population), intermingle with the Finnish-speaking majority. Although the two language communities are quite similar to each other in socio-economic status (SES), education and health-services, Swedish speakers have significantly better health and survival. Social trust has been pointed out as one of the most important dimensions of social capital that has been suggested to predict various population health outcomes. Recent studies have shown that the Swedish-speaking community owns more social capital than the Finnish-speaking community. Social trust is variably considered as source, mediating mechanism or outcome of social capital. This paper investigates the associations between social trust, social mistrust, language group, gender, age, family income, education and physical activity in Finland. The participants in the randomly selected samples of Swedish speakers (n=1100) and Finnish speakers (n=1075), aged from 25 to 75 years, were asked about their friendship network, trust and mistrust. Also, e.g. income, education, citizen activities were assessed. The MCA (Multiple Classification Analysis) analysis revealed a significant positive association between social trust and the language group (MCA 3.20 for Swedish speakers and 3.06 for Finnish speakers), adjusted for all above-mentioned variables. We found significant associations between social trust/mistrust and family income status/education, and frequently exercising subjects had more social trust (and less mistrust) than inactive subjects. Multiple logistic regression analysis showed, that after controlling for the above-mentioned factors (confounders), Swedish-speakers (odds ratio 0,39) had 2,5 times less mistrust than Finnish-speakers (odds ratio 1,0). In Finland, the Swedish-speaking minority seems to have more social trust and less mistrust than the Finnish-speaking majority. Further studies on assumed links between social trust and health in the Swedish- and Finnish-speaking populations are in progress.

Keywords: Bilingual, Finnish-speaking, language, social capital, social trust, Swedish-speaking

Towards Learning Assets Management Systems for Support of Novel Methods for Corporate Intangibles Assets Accounting

Panayiotis Tahinakis¹, Vasiliki Moumtzi², Adamantios Koumpis² and Manolis Gkinoglou²

¹Department of Accounting and Finance, University of Macedonia, Greece

²Research Programmes Division, ALTEC S.A, Greece

Abstract: Our paper is about a Learning Assets Management system which aims to support novel methods for corporate Intangibles Assets Accounting. Within a company (like in all human settings), learning happens all the time. By definition, all business processes increase the knowledge of the people who are involved in them (at least, involvement increases "experience"). What any company would like to achieve is to understand (and exploit) how business processes create learning outcomes that become permanent and valuable knowledge assets both for the employees and for the company. To put it simply: Employees learn all the time. But how can we measure this learning?. Problem: Employees do learn in their organizations. Their motivation to learn largely depends on the rewards they expect to receive from their improved skills, as these result from their learning. Today these rewards are qualitatively assessed, based on human resource management principles, and not reflected in the financial statements (value) of the organizations. But if the outcome of learning processes could be quantified, and this quantification could result in increased benefits for the employee (salary or otherwise), then the employee would be more motivated to learn, and would also target its learning towards the acquisition of skills that would ensure value to the company. Furthermore, employee payments would be based on quantified indicators, and become more efficient. Therefore a need to quantitatively assess the outcome of inter-organizational learning processes is apparent. We propose an ICT environment that will register, monitor, and quantify the outcome of inter-organizational learning processes. The proposed system will be linked to the ERP / accounting systems of the organizations, so that the outcomes of the learning processes are reflected firstly in the balance sheets / book value and the total value of the entire organization.

Keywords: Learning assets, knowledge assets, ERP systems, corporate accounting for intangibles

The Impact of Welfare State Development on Social Trust Formation: An Empirical Investigation

Larysa TAMILINA

University of Bremen, Bremen, Germany

Abstract: Social trust is shaped by many society-level as well as individual-level factors. One of the determinants highly debated in literature is the welfare state which reflects the level of state intervention in organizing individuals' welfare. Theoretical as well as empirical studies are in their vast majority controversial with respect to the kind of effects welfare state may have on social trust formation. However, all of them have one element in common – they measure welfare state development through social spending. The main objective of this research consists of demonstrating that in order to precisely estimate this impact, it is necessary to introduce a new operationalization for welfare state development which would reflect the outcomes rather than the process of the state intervention into individuals' arrangements. The latter can be obtained by decomposing Esping-Andersen's welfare regime typology and directly evaluating the effects of decommodification and stratification on social trust indexes. This hypothesis is checked based on a cross-sectional analysis for a set of 18 OECD countries while using multi-level modelling as the main research method. The individual-level analysis demonstrates that decommodification enhances trust formation. The aggregated-level analysis allows for explaining that this positive effect of decommodification on social trust mainly goes through reduction of income inequality which is the key aim of social policies. Moreover, the analysis demonstrates that the quality of public institutions, in general, and welfare institutions, in particular, conducts essential influence on the level of trust in the societies. Besides decommodification, the form of social stratification was found to matter for social trust. Preserving existing class structure inherent to conservative welfare regime type influences negatively institutional trust, but positively interpersonal trust. Stigmatizing approach apt to liberal welfare state erodes interpersonal trust, but boosts institutional trust. Finally, socialism's universal approach leads to crowding-in effects in both forms of social trust.

Keywords: Trust, welfare states, decommodification, stratification, crowding-out

The Limits of Rationality on IC and KM Analysis

Eduardo Tomé¹ and Aino Kianto²

¹Universidade Lusíada de Famalicão, Portugal

²Lappenranta University of Technology, Finland

Abstract: In this paper we analyse how the concept of rationality is linked with Intellectual Capital (IC) and Knowledge Management (KM). We assume that in traditional economic analysis rationality is a characteristic of the models. But we are also aware that economists have dealt intensively with the problematic of irrationality, and therefore more complex models have tried to address the question of irrationality. One of the main approaches in that context was constructed by Herbert Simon, and was based in the concept of bounded rationality. The events of the last months in the economic world seem to prove that irrationality is an extremely important concept. However, to our knowledge irrationality has been applied very seldom to the analysis of IC and KM. We study the irrationality question in three perspectives: valuation of companies; knowledge sharing and knowledge transfer; knowledge creation. We conclude that irrationality is decisive to understand IC and KM in every one of those three perspectives.

Keywords: Intellectual capital, knowledge management, rationality

Actual Knowledge Management Usage in the Mexican Companies, ¿Fail or Success?

Daniel Trejo-Medina

Universidad Anáhuac México Sur, México City, México

Abstract: The need for Knowledge Management (KM) has been drastically increasing so organizations may meet the high level of complex business change, dynamics and uncertainty. This research, quantitative and qualitative, approaches the challenge of the KM in a sample of Mexican organizations, a large number of them do not have a standardized model from which they can obtain benefits in order they can achieve higher revenue, increase the employee collaboration and innovation, which impacts not only in the organization's productivity, competitiveness but in the country one. We found that large companies, with more than 10,000 employees) have already an incipient and isolated KM implementation, most of them with meagre results. In the other side most of the companies within 50 and 1000 employees has no KM implementation, usage or scheme in how to get benefit or instrument a KM solution, they are immediate candidates due to their market position, services they offer and their search to obtain a value added service or product with shorter production cycles, and also due their need to innovate using their own explicit knowledge. We propose a model its usage in Mexican organization to allow them to identify and take advantage of the suitable knowledge and aligned it with their business strategy. The theoretical frame is based in the best practices emitted by international organizations such as the OECD, researchers and leaders in this expertise area and research line, also based in the diverse actual models for KM. The KM goal may vary in the companies, the analysis showed the pertinence to evaluate and measure the benefit and return of investment when they pretend to implement a KM solution, and must add a positive value to the organization to the Mexican Organization. The proposed model, ADSA, includes four stages: analysis, design, solution, appreciation. Each one it is logically aligned to the business requirement a knowledge based value generation, always following up the social and technical enablers. A properly used knowledge management strategy will impact positively in a higher revenue or profit, and also contributes in the generation of collective intelligence, that cans impulse the construction, and sustain for Mexico's knowledge economy.

Keywords: Knowledge management, Mexico, ADSA, collective intelligence, Latin-American, intellectual capital

The Virtual Tool for the Intellectual Capital Management

Hovhannes Vahanyan

Russian Academy for Public Service under the President of Russian Federation, Moscow, Russia

Abstract: For IC management is offered unique and simple virtual tool “**Virt Trend Chart**” (**VTC**). It simulates the basic functions of popular methods of IC measurement, and the tool of the European innovative policy. The research of 194 organizations of the European innovative networks, 62 Russian innovative centers, 31 transnational corporations, 21 Russian large commercial organizations (CO) and 103 universities are carried out by means of VTC indicators. The analysis of indicators has allowed defining character and quality of IC management, trends of IC development. Managers of strategy and innovative policy by means of VTC can: independently estimate efficiency of business and its infrastructure; display the future successes of the organizations; reveal tendencies of development. Unique advantages of VTC are: it aggregates the basic advantages of known methods and models, including IC Index, Scandia Navigator, and IC Monitor (Edvinsson and Malone, 1997; Stewart, 1999; Skyrme, 2002; Sveiby, 2006). VTC is objective, does not depend on the human factor, it is accessible, but the main thing adequately considers the important component of knowledge economy - developing infrastructure of information-telecommunication technologies, features of network economy. Moreover, VTC reflects balanced of IC indicators to the strategic purposes and tasks. The Virtual IC Model - is a network model, which simultaneously displays the new virtual organization, new management system, and external influences of an environment – the market, branch, competitors by whom it is possible to identify and measure in network by means of searching systems and their thematic catalogues. Offered ideas and model have not analogues.

Keywords: Network economy, virtual intellectual capital, IC measurement and management

Using Scenarios to Explore the Potential for Shifts in the Relative Priority of Human, Structural and Relational Capital in Generating Value

Christine van Winkelen and Jane McKenzie
Henley Business School, University of Reading, UK

Abstract: Collaborative research over a two year period involving eighteen knowledge management practitioners and a team of academics explored the evolution of a next generation knowledge management agenda. Three scenarios were developed that explored the implications of two dimensions: firstly the underpinning organisational purpose in relation to the factors of production in both an industrial and a knowledge economy paradigm, and secondly the consequences of a predominantly transactional or relational psychological contract between individuals and organisations. By studying the drivers shaping the dynamic evolution of each scenario, we identified that organisations need to pay different levels of attention to the components of structural, human and relational capital in order to optimise value generation in each scenario.

The first scenario looks at the natural evolution of the industrial economy paradigm as the pace of change accelerates and the expansion of the competitive environment increases the need for product innovation. The stimulus for this innovation is the quality and motivation of the people employed. Human capital management is the main lever to optimise organisational performance in this scenario. The next two scenarios look at organisations operating in the knowledge economy paradigm. One considers the consequences of continuing with the conventional psychological contract with employees based on a transactional exchange of money for time. A large investment is needed in the structural capital mechanisms to manage the organisational ownership of knowledge and to monitor and stimulate performance in delivering knowledge-based services. In the other scenario, the focus shifted to a situation where individuals and organisations negotiate common areas of interest before becoming involved together in something approaching a partnership. Learning and competitive agility emerge from networks of individuals and groups coalescing around shared objectives. Relationship capital becomes the basis of value generation.

Keywords: Knowledge management, scenarios, intellectual capital, knowledge economy, psychological contract

Intellectual Capital Research in Romania: The Case of Developing a University Research Centre

Simona Vasilache and Constantin Bratianu
Academy of Economic Studies, Bucharest, Romania

Abstract: The paper presents the case of developing the *Research Centre for Intellectual Capital*, within the Academy of Economic Studies, Bucharest. This Centre has been started immediately after our participation to the IC Congress 3-4 May 2007, organized by the Research Centre for Intellectual Capital, INHOLLAND University, Amsterdam, taking as a model the work pioneered by Professor Daniel Andriessen. We summarize its process of formation, considering its premises, its promoting factors, as well as the inertial forces which had to be overcome. Further on, we discuss the realism of its mission, based on the analysis of its internal and external environment, and list the main challenges for the centre, in a short-term, and in a long-term perspective, while advancing strategies to react to these challenges. Specific issues concerning Romanian university management and research management are outlined, in order for the audience to better understand the opportunities and limitations the centre is subject to. An evaluation of the present state and future scenarios of evolution constitutes the main outcome of this study, which raises an issue of interest for Romanian research in universities, in the broad sense, as well as for researchers focused on intellectual capital, in the narrow sense. Our conclusions serve as a base for comparison with other similar research centres in the world, by checking the relevance of our problems and solutions against reports from other peers engaged in the same kind of research. The situation of our centre, as presented in the paper, is illustrative for the positioning of a new field of study in the research context of Romanian universities, and may lead to a rethinking of the premises on which research is projected and supported. The importance of our presentation for the intended audience resides in the novelty of the research centre, in a country with an emergent economy, whose industry and academia discover, these days, the realm of intellectual capital. The case of this research centre is significant for the intangibles' revolution, in a society, the university included, still reluctant to the principles of this post-tangible era.

Keywords: Intellectual capital, research centre, Romanian university

Linking Business and Competitive Intelligence with Intellectual Capital – How Could BCI Contribute to ICM?

Vilma Vuori

Tampere University of Technology, Tampere, Finland

Abstract: Intangible assets are increasingly emphasized as important means of gaining competitive advantage. In addition of managing and developing intellectual capital (IC), e.g. intellectual properties and human capital, organizations are increasingly using information and knowledge to rise to the challenges caused by changing business environment. The markets are turning global and changes occur faster than before and demand quicker response. Business and competitive intelligence (BCI) is one of the means that organizations utilize to overcome these challenges. BCI refers to a process aimed to support organization's decision-making by providing information essential for its operations as well as for forming and executing its strategy. By utilizing a BCI process an organization refines raw data into information and actionable knowledge. BCI and intellectual capital management (ICM) seem to have many things in common. They both aim to enhance business performance by creating value from intangibles, BCI by enabling better informed decisions and ICM as better developing and utilizing various kinds of intangible assets. BCI can also be seen as a part of organization's IC, since it both uses and produces intangible assets aiming to create value from them for the organization. Since BCI seems to intersect IC and ICM in many points, could there be some synergy found by examining these research themes together?

This conceptual paper discusses the linkage between BCI and IC and discusses how BCI could contribute to ICM. The paper consists of the following sections: First, BCI is defined in the context of this paper. Second, BCI is examined as a part of IC by classifying its components according to a general tripartite IC classification. Third, BCI's possible contributions to ICM are contemplated. As a conclusion, the paper suggests that BCI creates and increases organization's IC and acts as an ICM tool. The BCI process uses organization's IC as an additional input with information acquired from external sources, combines them, shares them within the organization and thus creates and accumulates organization's IC. At the same time BCI also enables knowledge accumulation and this way develops HC: BCI increases the amount and quality of information and knowledge available for employees, thus improving the accumulating of their knowledge and thus, develops HC. Including employees in BCI process also turns HC into SC: when employees' tacit knowledge is combined with other information and documented in explicit form, it is simultaneously turned into SC, thus becoming an organizational asset. BCI also provides the organization a clearer view and understanding about its business environment, and this can be seen as developing RC. Hence, BCI can be seen as an ICM tool that seems to have most contribution in turning HC into SC and developing RC.

However, as a discipline BCI seems to be somewhat apart from the IC field, even though there are a lot of similarities in the scope of academic and managerial activities within the two fields. It seems possible that cross-disciplinary research efforts could provide some new insights for both fields of research.

Keywords: Intellectual capital, intellectual capital management, business and competitive intelligence, knowledge, refining information

Future-Proofing HEROs: Moving From Theory to Practice

Campbell Warden¹, Ozcan Saritas², Katja Pook³, Susana Elena⁴ and Adrian Curaj⁵

¹Instituto de Astrofísica de Canarias, Tenerife, Canary Islands

²University of Manchester, UK

³pook perspectives, Karlsruhe, Germany

⁴Institute for Prospective Technological Studies, Seville, Spain

⁵Executive Agency for Higher Education and Research Funding, Bucharest, Romania

Abstract: HEROs (Higher Education and Research Organisations) are embedded in a changing environment that is increasingly marked by growing competitiveness. Changes in society and the economy have a fundamental impact on the way HEROs need to behave and develop. These external factors are linked to internal challenges for which their traditional culture, structure and strategy are not providing sustainable answers. They need to build an intelligent organisation with a vision of the future, while incorporating and applying sustainable management methods. So-called intangibles are of special interest in the management and development of HEROs, because they make up the core justification for their very existence. It could be expected that HEROs are experts in development and exploitation of intangibles, e.g. its Structural Capital, its Human Capital (including, but not only, its students and faculty) and its Relational Capital. Nevertheless, this expectation is not yet satisfied in all cases; HEROs need to improve their mental models, skills and methods related to the management of their intangible success factors, from vision building to the assessment and continuous development of their Intellectual Capital (IC). All HEROs have both intangible assets and liabilities; among the latter may be a culture, or structure, that effectively discourages cross disciplinary research and development, or the industrial and commercial exploitation of its IC by only rewarding traditional academic achievements (such as the number and impact of publications) in promotions to tenured or management positions. As Foresight methods are characterised by participative processes that promote the interplay of all the relevant stakeholders, they can be used to address intangible barriers and educate power brokers in the advantages of adopting a holistic view of the HERO's role in regional socio-economic development. The paper focuses on how, with the right quality of leadership and appropriate preparation, it may be possible for a HERO, in either the Public or Private sector, to address the challenges of major change management programmes over a period of time by implementing on-going Foresight and IC Management processes. This is addressed by exploring the extent to which the application of these methods at an organisational level could increase the probability of sustainability in the face of the present and upcoming challenges for HEROs. The paper points out benefits that could be derived from current approaches and proposes the development of a holistic view that covers the entire management cycle by integrating Technology Foresight (TF) and IC Management.

Keywords: Foresight, intellectual capital management, organisational development, sustainability, competitiveness, universities and research organisations

Intellectual Capital Creation in Post-Communist European Union Economies in 2004-2008

Piotr Wisniewski

Warsaw School of Economics, Warsaw, Poland

Abstract: The paper will aim to gauge the impact of all major classes of intellectual assets on the recently admitted post-communist countries of the European Union (EU) by addressing the following two hypotheses: Hypothesis 1: the high quality of intellectual assets in ex-communist, EU convergent economies has helped lure foreign capital and has led to substantial direct and indirect investments in these countries. Hypothesis 2: the aforementioned investment inflows have spurred creation of immaterial goods and services in these countries, as emphasis on research and development on intangibles has grown, while commercialisation and legal protection have improved dramatically. The EU expansion implemented since 2004 has been the most significant of its kind since the inception of the Community. Many new EU entrants have struggled to overcome the backwardness of their systems: conceived and cultivated in (perhaps) the most dysfunctional and counterproductive economic circumstances ever imaginable. As bizarre as it may appear in the context, the EU convergent economies, despite an undisputable obsolescence of their infrastructure and manufacturing/services potentials, have displayed a high level of sophistication in selective - and yet critical - areas of intangible development:

Human capital The educational systems of post-communist EU countries have, generally, delivered a superior standard of instruction and - oftentimes - scientific research, with particular regard to scope and universality.

Social capital: The societies of the admitted EU countries have displayed numerous characteristics of modernism (including youngness of their populations), which has positively reflected on the propensity to innovate.

Risk tolerance The new EU countries have shown a profound appetite for risk, a prerequisite for innovation. This has been as much a function of economic development and aspirations, self-reliance (shock therapies of post-communist governments wiped out much of the welfare state benefits) as technological leapfrogging.

Having said all that, the ex-communist countries of the enlarged EU at the very outset of their transition faced systemic obstacles to the expansion of their immaterial asset base:

Commercialisation The post-communist EU members have not been equipped with the managerial skill set necessary for the successful marketing of intangibles created within their borders.

Inadequate legal protection The collectivism of communist economies did not foster an environment of security with regard to traditional assets, let alone vis-à-vis intangibles. Plenty thus needs to be done to reform the ex-communist legal systems.

Emigration Following the overthrow of communism and gradual lifting of barriers to the free movement of intellectual assets across the enlarged EU, some innovators and many of their works have oozed away. This, if left unmitigated, might be a long-term threat to intangible creation in "New Europe".

The research will try to examine correlations between the initial status and growth of intellectual assets in the post-communist EU and inflows of foreign investment after the accession. Individual EU members will be ranked by the quality of their intellectual capital base, and scale of foreign direct/indirect investment. Finally - policy recommendations will be formulated to enhance the potential for intellectual capital creation.

Keywords: Intellectual capital, post-communist, European Union

Measuring Intellectual Capital - An Approach for Management Purposes

Inge Wulf

Clausthal University of Technology, Germany

Abstract: Efficient management requires decisions about the companies' objectives, potentials and activities. Performance management systems are an important assistance. Within performance management systems intangibles are only considered in some extent in quantitative manners, although they are undisputedly a determining factor for performance and future prospects of companies. One reason for this deficit is that the bridge from the categorization of intangibles to the measurement in monetary items of the intangibles at large and the distribution of the aggregative value to the single intangibles is methodically not satisfied solved so far. Causal analytical procedures and forecast procedures could achieve such monetary ascertainment for intangibles. Hence, the main feature of this paper is to present a procedure for the measurement of intangibles with regard to consideration of indicators within performance management systems. The measurement procedure is a combination of correlation and regression with the use of indicators and investment theoretical present value methods. From the starting point that the difference between enterprise value and invested capital at fair value is mainly corresponding to the amount of Intellectual Capital not considered in the balance sheet, this difference, called Market Value Added (MVA), becomes the leading item that shall be determined by using DCF-model. Based on the assumption that the information about the effect of intangible factors on planning figures would increase the quality of the planning data, this measurement-model for intangibles considers two aspects. On the one hand, in this calculation I focus the continuation value which is - beneath the discrete planned discounted FCF for a planning horizon about 5 years - one factor in the DCF-model that encompasses the value added for the time after the planning horizon. On the other hand, I am considering relevant indicators for intangibles used for example in the Balanced Scorecard. By means of regression calculation the functional correlation between the underlying indicators for intangibles and the FCF as parameter of company valuation methods, could be determined which in turn could be used as a basis for prognosis of the depending variable (FCF). As the number of value drivers of Intellectual Capital as an independent variable normally is very high, the iterative multiple regression calculation is used. This measurement-model considers two approaches: Both are based on the single regressions of the relevant indicators which are compressed to a multiple regression. One is a multiple regression model without scoring as the weighting factor and the other is a multiple regression model with scoring as the weighting factor. This combined evaluation model based on indicators and DCF-model allows on one hand a future oriented evaluation and on the other hand with the consideration of the relevant indicators a consideration of the basic cause and effect dependencies which is necessary for management purposes.

Keywords: Measurement, Intellectual Capital, management, discounted cash flow, market value added, indicators

Applying Intellectual Capital Process Model for Creating a Defensive Protection System to Local Traditional Knowledge: The Case of Mea-hiya Community

**Pitipong Yodmongkon and Nopasit Chakpitak
Chiang Mai University, Thailand**

Abstract: The purpose of this paper is to discuss the implementation of intellectual capital process to manage the traditional knowledge of the community. This qualitative research was conducted through an exploratory method in co-operation with the Mea-hiya Community Cultural Council, Chiang Mai, Thailand. A four step-approach IC process was recommended; this was aimed at the successful acquisition of the proposed model. The authors demonstrated the intellectual capital process model's usefulness. Not only does the model encourage the community to formulate strategies from the stakeholders, but it also puts the strategy in practice because it is grounded in the stakeholders' needs and expectations. The process is more quantifiable by having key success factors' indicators measuring the traditional knowledge capital. The discussion leads to the formulation of a defensive protection system. The outcome of the community's traditional knowledge leans toward a local community-based organizational paradigm. Consequently, the Mea-hiya community pointed out the strategy to conserve and protect traditional knowledge by creating a defensive protection system (conserve, transmit, and protect of traditional knowledge). This paper allows practitioners to reflect on a case for implementing an IC process to manage cultural traditional knowledge.

Keywords: Intellectual capital, community, traditional knowledge

Knowledge and Trust Issues for Intellectual Capital Measurement

Behrang Zadjabari and Pronpit Wongthongtham
Curtin University of Technology, Perth Australia

Abstract: Trust in intellectual capital has become an increasingly important factor. External trust such as trust between business and customer (B to B and B to C), business and supplier, and trust between customer to customer, also internal trust such as trust between employees vertically and horizontally is seen as crucial to the expansion of intellectual capital in a business. Although there is an interest in measuring and reporting the relationship between intellectual capital and business performance and some measurement models have been proposed, in most of these models such as BSC, Skandia, IC audit, Intangible asset monitor, MVA and EVA, Knowledge and an asset produced by the knowledge are assumed as the fundamental sources of wealth and the role of trust has not been investigated. The concept of trust indicates business component faith to the shared knowledge between them. The key to success in business is obtaining and maintaining the trust (internal and external) of the participants in the markets. Trust also affects on knowledge sharing and in order to increase knowledge sharing, the participants must have good faith to the shared knowledge resources. Otherwise, participants are more likely to share knowledge with the business competitors. In this paper, we extend the value of intellectual capital from the knowledge to “knowledge and trust” as the two important variables in intellectual capital. Sustainable business performance will be discussed and demonstrated the platform of this sustainability can be created by the knowledge and trust. Additionally, most current intellectual capital measurement models are assessing the business performance in static environment. However, the intellectual assets consist mainly of dynamic elements. Knowledge and trust are dynamic elements and we should discuss them in a dynamic environment and in a specific time slot. Therefore, in this paper variables are analysed in dynamic modelling systems. Also, in current business performance models most of the data resources are internal where external data resources are also important. We point out in this paper that improving external variables such as trust within customers can affect on business performance.

Keywords: Knowledge, trust, Intellectual capital measurement, business performance

Activating Potential IC: Effective Addition to Active Labour Market Policy in Rotterdam?

**Kees Zandvliet, Tim Berretty, Marion Collewet and Olivier Tanis
SEOR B.V., Rotterdam, Netherlands**

Abstract: In Rotterdam, the average educational level of the population is lower and unemployment and inactivity are significantly higher than elsewhere in the Netherlands. Therefore the economic performance of Rotterdam lags behind other parts of the country. This suggests that some potential human and intellectual capital in Rotterdam remains unused. This situation raises various questions, two of which are addressed in this paper. First, we illustrate the benefits of activating this unused potential and closing the intellectual capital gap between Rotterdam and the national level. Second, we discuss policy scenarios aimed at developing and making better use of human and intellectual capital in Rotterdam, or in general terms at local or regional level. We identify two types of situations in which human or intellectual capital are not sufficiently developed or used: (a) when individuals reach an educational level below their capacities, and (b) when individuals able to work do not participate in the labour market. Obviously, those situations overlap at least partially. Improving the average educational level of the population is an important way to activate unused potential IC, because a better educated population is not only able to perform higher-skilled jobs, but is also more likely to participate in the labour market. Raising the average educational level has economic and non-economic effects on society. In this paper the potential benefits of investment in education are estimated. This estimation is based on three possible effects of an increase in the average educational level: improvement of the average earned salary, improvement of the average probability to find a job and positive non-economic effects, for instance on health and criminal behaviour. Raising the average educational level has large potential benefits, but costs must be made in order to realize these benefits. We compare the costs and benefits of investment in education with more traditional forms of active labour market policy (ALMP), such as subsidized employment, mediation, etc. In the cost-benefit analysis, we pay particular attention to the variation that occurs in the results as we make different assumptions about the effectiveness of policy and the relation between education and economic performance. We also devote some attention to important implementation aspects. These concern, among others, the need for endurance and a long-term perspective, as investment in education takes time to pay off.

Keywords: Investment in education; cost-benefit analysis; human capital; local and regional development

The SECI Model and the Learning Curve Phenomenon

Yannis Zorgios¹, Orestes Vlismas² and George Venieris²

¹CLMS (UK) LIMITED, Croydon, Surrey, UK

²Athens University of Economics and Business, Athens, Greece

Abstract: This study investigates the relationship of the SECI (i.e. socialization-externalization-combination-internalization) modes of knowledge conversion with the learning curve phenomenon within software development process. We specified an ANCOVA learning curve model with slope control variables corresponding to different modes of knowledge conversion (i.e. externalization, combination, internalization). The ANCOVA learning curve model is estimated utilising a data sample of 3104 observations obtained by the ISBSG Repository CD 10. The learning rate seems to be affected by different modes of knowledge conversion in different directions. The research findings of this study are consistent with previous research initiatives as far as concerns that SECI modes of knowledge conversion affect organizational but they reveal that knowledge flows and stocks (i.e. externalization and combination) might have negative effects on the rate of performance improvements within team based production environments.

Keywords: Learning curve phenomenon, learning rates, SECI, software developer teams