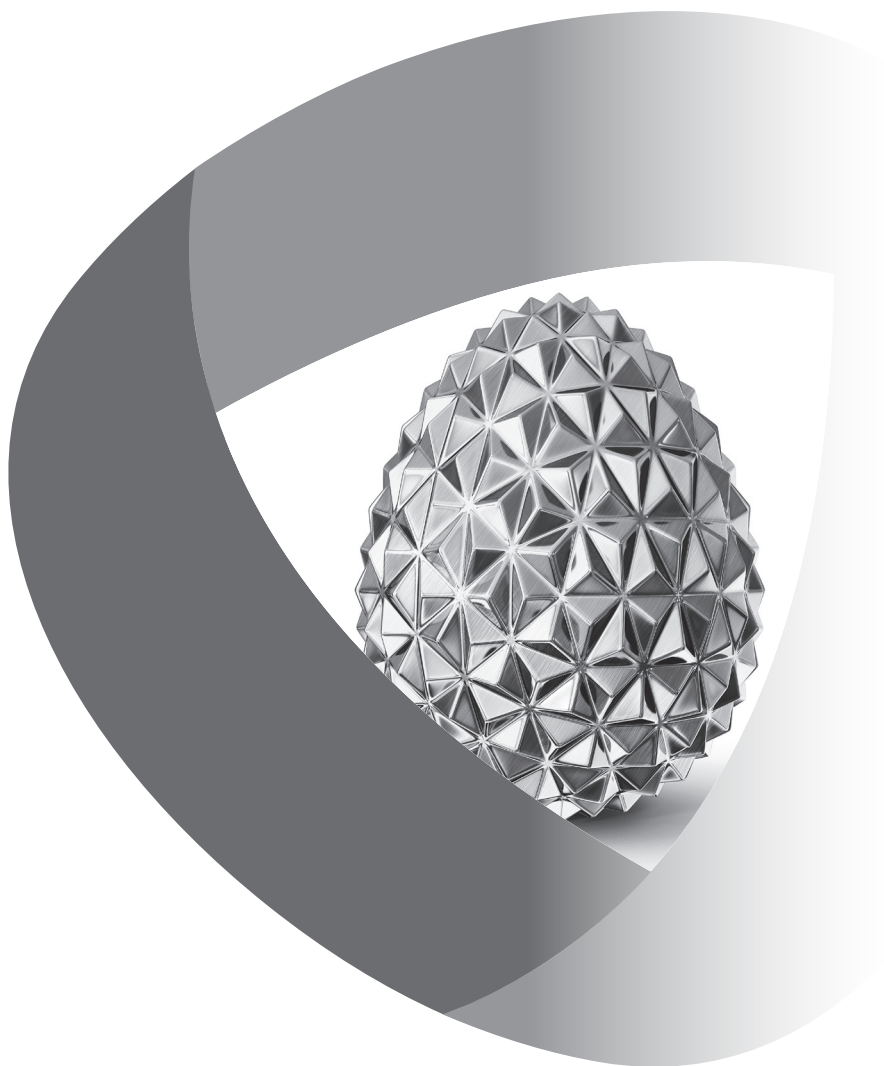


Measuring the ROI of Knowledge Management

2nd edition



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Executive summary

For organisations looking at Knowledge Management (KM), it is no longer a question of ‘should we?’ It is now a question of ‘how should we?’ KM has been accepted as an integral practice for most organisations – however many are still, understandably, cautious of the investments they make in the current financial environment following the economic downturn.

The intangible nature of knowledge resources has proven to be a difficult issue for organisations to tackle. It is no easy process to ascertain the value of an unquantifiable resource, which makes it difficult to justify investment in KM. As David Griffiths remarks in chapter one: ‘The measurement of knowledge value is difficult. It is specific to time, context, and the perception of what it is that constitutes a knowledge asset.’ So, what is the best course of action for an organisation looking to prove the value of their KM efforts?

Measuring the ROI of Knowledge Management 2nd edition aims to explore how leading industry experts prove the value of their KM initiatives and justify investing in them. From outlining the best methods of quantifying the return from KM, to discussing the limitations of an ROI-focused approach, this book looks to present an all-encompassing view of how to best tackle this matter that is rife with guesswork and uncertainty.

David Griffiths, founder of K3-Cubed, starts the book off with an introduction to the ‘knowledge economy’; outlining what the key economic drivers of KM are, how KM can create a competitive advantage, and why it is so difficult to measure its value.

Moving into part one, the book focuses on the quantifying of knowledge assets, and the returns they bring. In chapter two James Gunn, chartered engineer and knowledge management consultant, explores the varying business case arguments that can be made to justify a KM programme, and identifies their strengths and weaknesses. Examples of these include; the creation of new markets, capitalising on a strategic advantage, and maintaining legal obligations. In chapter three, Tim Hawley, associate director of Arup, explains the process of designing

and utilising a ‘knowledge audit’ to not only determine exactly what knowledge exists in an organisation, but also determine how best to drive a positive ROI from the defined assets.

The next biggest step in technological improvement for many organisations is the successful integration of Artificial Intelligence (AI) into their business practices. Chapter four moves to address the incoming issue of AI as a knowledge asset, with James Loft, chief executive officer at Matter AI, discussing how AI can affect the KM space by adding value, and how it can ultimately support in delivering a good return on KM investments.

Chapter five features Hélène Russell, founder of TheKnowledge Business, giving an overview of the best practical methods for measuring KM projects to better understand their positive impacts and their ‘value for money’; showing how to use the ‘balanced scorecard’ to ensure a balanced view of all measurement systems, and the 10 key ‘design tests’ that a measurement system should aim to fulfil.

Part two of the book then moves into outlining the limitations of a solely ROI-focused approach to understanding the value of KM projects, giving light to other approaches that allow room for the intangible nature of knowledge resources. Chapter six features John Hovell, head of organisational development at BAE systems. explaining how looking at the ROI is only useful to a certain point, and is more effective when used in conjunction with other measurement efforts; such as the use of anecdotal evidence of organisational wins.

In chapter seven, Stan Garfield, knowledge manager, author, and speaker, proposes arguments against the measurement of the ROI of KM – outlining that focusing on the benefits and progress of KM project is a more helpful approach. This leads into a literature review of more leading industry experts outlining the issues and limitations of ROI-based measurements.

In chapter eight Andrew Gent, lead information architect at VoltDB, gives an overview of how supporting and nurturing the on-going investment in KM is a more effective and healthy method of approaching and tackling value, as justifying the ROI in a one-off case often works against the project that is trying to be implemented. Tips for keeping the project safe from being axed by budget reviews are outlined; including embedding KM into an organisations daily operations and designing the KM initiative to cost as little as possible by repurposing existing resources.

Finally, in chapter nine, Professor Dave Snowden, chief scientific officer of Cognitive Edge, offers an explanation of the differences between outcome, output, and vector measurements – and how holding explicit goals that are tracked can destroy the intrinsic motivation behind the project. He then moves to outline newer approaches that are emerging to deal with systems and resources that are both intangible and uncertain.

About the authors

Stan Garfield is a knowledge manager, communities of practice evangelist, community facilitator, collaboration and social media specialist, social business practitioner, author, speaker, and leader based in Northville, Michigan. He has worked in the field of knowledge management for over 20 years.

Stan spent 8 years at Deloitte leading communities and enterprise social networking. Prior to that, he spent 25 years at HP, Compaq, and Digital Equipment Corporation.

Stan launched Digital's first knowledge management programme in 1996, helped develop the corporate KM strategy for Compaq, and led the Worldwide Consulting & Integration Knowledge Management Program for HP. He also worked for PricewaterhouseCoopers, St. Louis University School of Medicine, and Washington University School of Medicine.

Stan holds a BS in Applied Mathematics and Computer Science from Washington University in St. Louis. He leads the SIKM Leaders Community with over 600 members globally, and is invited to present at numerous conferences, including KMWorld. Stan has published over 100 LinkedIn articles on leadership, innovation, knowledge management, communities of practice, enterprise social networks, and social media.

Andrew Gent has 30 years experience working in knowledge management and information architecture for everything from large global corporations to first round startups. His focus is the intersection of knowledge and usability. He is currently the lead information architect at VoltDB Inc. He is also the author of a book of poetry, *[explicit lyrics]*, which won the 2016 Miller Williams Prize.

David Griffiths, PhD (Edin), MSc (Edin), CMgr FCMI is a popular international speaker, consultant, and founder of K3-Cubed Limited. K3 is a University of Edinburgh start-up company (now independent, but funded by the University in 2009 as a result of proprietary Knowledge Management research conducted by David), focused on consulting and

development solutions for organisations facing challenges in the areas of Strategy, Knowledge Management, Learning and Development, HR agility, complexity, and resilience.

K3-Cubed has delivered services for organisations as diverse as Maybank (Malaysia), the Bahrain Government, Scottish Water, the Scottish Government, Fife Police, Ubisoft, Bahrain Natural Gas, Indiana CPA Society, Georgia CPA Society, Mars Inc., Quintiles Pharmaceuticals (Europe and APAC operations), Middle East NGOs, US top 400 accounting firms, the University of Glamorgan, British Aerospace, University of Wales Trinity Saint David, Visa (Europe), the Water Research Centre (UK), EcoPetrol (Colombia), Juran Benchmarking, Atomic Weapons Establishment (UK), European Institute of Innovation and Technology, Abbot Vascular, the Water Research Centre, TallyFox Social Technologies (Switzerland), CPA Society Executives Association (USA), DuPont, Kaleo Technologies (USA), the European Training Foundation, and the English Institute of Sport.

David holds a PhD in Knowledge Management and an MSc in the Management of Training and Development, both from the University of Edinburgh. David is also a chartered fellow with the Chartered Management Institute.

David's work won an Emerald Literati Network Award for Research Excellence in 2012. In December 2011 he was recognised as one of four key worldwide influencers in the Knowledge Management field. In 2013 he was listed as one of the top 30 Knowledge Management influencers in the world ('Top 100 names to know in KM'). In 2014 his Knowledge Management and Organisational Learning project with the Indiana Certified Public Accountants Society (INCPAS) won a 'best project' award at the Society of Association Executives annual awards. In 2014 he wrote a book on HR development for the United States accounting profession, which was recommended by the American Institute of Certified Public Accountants as a top read for the profession. In 2015 he was again named as one of the top 10 influencers in the field of Knowledge Management. In 2016 David won the Chartered Management Institute Management Article of the Year Award for his article on leadership, decision-making and change management and the prestigious ASAE Power of 'A' Elite Summit Award for the CPA CoE project (Indiana).

James Gunn is a chartered engineer and has been a knowledge management consultant for 15 years. He has led knowledge management programmes in large organisations including government ministries and

the aerospace, electronics, telecoms, and not-for-profit sectors. He has a broad understanding of business, knowledge management, and knowledge technology gained from experience as well as from working as an associate lecturer for the Open University Business School. He now leads KM programme implementations for Tacit Connexions, a knowledge systems integrator. James regularly speaks and writes on knowledge management and knowledge technology. James is a member of the BSI's working group on ISO 30401 (the Knowledge Management Standard)

Tim Hawley is an experienced consultant and facilitator, advising on knowledge management, organisational change, and business performance improvement. Focusing on improving organisational effectiveness and delivering value from complex integrated change programmes.

Tim works with organisations to help shape their thinking around how best to leverage their intellectual capital and align their knowledge management programmes with their business objectives. Enabling organisations to better adapt to their rapidly changing environments by adopting new ways of working and building organisational resilience.

Tim has over 30 years of experience across the private, public and third sector, and has led a series of major knowledge management and organisational transformation programmes, often internationally and particularly across Asia.

Tim is an associate director of Arup, an independent firm owned in trust on behalf of its staff of designers, planners, engineers, consultants, and technical specialists; and globally recognised for its award-winning approach to knowledge management.

John Hovell is BAE Systems' head of organisational development (OD), and a practitioner, speaker, and author in OD and KM strategy and methods. John led a team to win a Chairman's Award at BAE Systems in 2014. Previously, John was part of a team to win the prestigious NOVA award, Lockheed Martin's top recognition award, for accomplishments related to knowledge management. Additionally, he was instrumental in the creation and execution of the enterprise KM strategy for ManTech International Corporation.

John volunteered as the corporate lead for the award-winning annual STEMmerday event where thousands of participants engaged in science, technology, engineering, and math-related learning activities. John serves on several advisory boards including the International Knowledge Management Institute, Training Industry Quarterly, and Synergy Development and Training.

John has lead or been a member of five different teams that have won awards from Chief Learning Officer magazine. In 2015, he was named the eighth most influential person in Knowledge Management. He published a chapter in a book titled 'Making It Real: Sustaining Knowledge Management'. In 2009, he was honoured by *Training Magazine* as one of the 'Top Young Trainers'. In 2007, he earned his Certified Knowledge Manager (CKM) certification from the International Knowledge Management Institute. He earned his Project Management Professional (PMP) from the Project Management Institute (PMI) in 2005. He earned his master's degree from The George Washington University in Washington, D.C. and his undergraduate degree from Virginia Tech in Blacksburg, Virginia, USA.

James Loft is a graduate of knowledge management from Loughborough University and has worked extensively in innovation and new technologies in transport and financial services, culminating in the running of an Artificial Intelligence consultancy firm that helps companies make AI tools fit their businesses rather than the other way around. His mission is to de-mystify the world of 'Applied AI' for organisations and users to level the playing field for the progression of the technology now, rather than as a vision for the future.

With an experienced background in innovation and service design he understands the gentle but vital balance between the design and the technology, and advocates an MVP style approach to new technology in order to achieve success.

An active member of a community of AI companies, tools, and platforms, James possesses a broad understanding of the possibilities the technologies can offer and will support in their implementation where possible to advance the marketplace.

Hélène Russell of TheKnowledgeBusiness specialises in helping organisations to grow and improve profitability, by helping them to understand and improve their knowledge systems. Hélène is the author of the Law Society's *Knowledge Management Handbook* and Legal Monitor's *Practical Projects in Legal KM*. She teaches open and in-house courses in Knowledge Management and also offers coaching, mentoring, and advice. She also runs Knowledge Network UK, the only regional knowledge sharing and networking group for law firm KMers in UK.

Hélène has spoken extensively on KM for Ark, Butterworths, UWE, Bristol Law Society, Alice, and at Knowledge Network UK, and has written regularly for *Managing Partner Magazine*. After a decade as a

solicitor with a major regional firm specialising in clinical negligence defence litigation, eight years in Knowledge Management and having recently obtained an MBA with distinction, she has a unique, deep understanding of how knowledge flows helps law firms and professional services organisations.

Professor Snowden is director of the Cynefin Centre at Bangor University and chief scientific officer of Cognitive Edge. Formerly a director of the IBM Institute for Knowledge Management he pioneered an organic approach to the field and was identified by Thomas Stewart, former editor of the HBR as one of the leading thinkers on tacit knowledge. He received a special award from the Academy of Management for his contribution to the field and his paper Complex Acts of Knowing is one of the ten most cited articles in the subject.

Chapter 1: Understanding the knowledge economy

By David Griffiths, founder of K3-Cubed

This report will often refer to the knowledge economy, which is a general term with multiple definitions aimed at describing modern economic challenges. It is an economy driven by the use, diffusion, and creation of knowledge.

This leads towards the application of knowledge as an economic resource. The deputy secretary general of the OECD¹ stated that competitive advantage is grounded in the ability of an organisation to be more efficient and effective than its competitors, with knowledge being something that needs to be harnessed to exploit the uniqueness of the organisation. It is this uniqueness that is of interest to organisations seeking competitive advantage, but it is the management of knowledge resources that is the biggest challenge facing organisations today. Organisations are operating in a global economy, characterised by the emergence of intellectual capital as a core value driver as the following statistics infer:

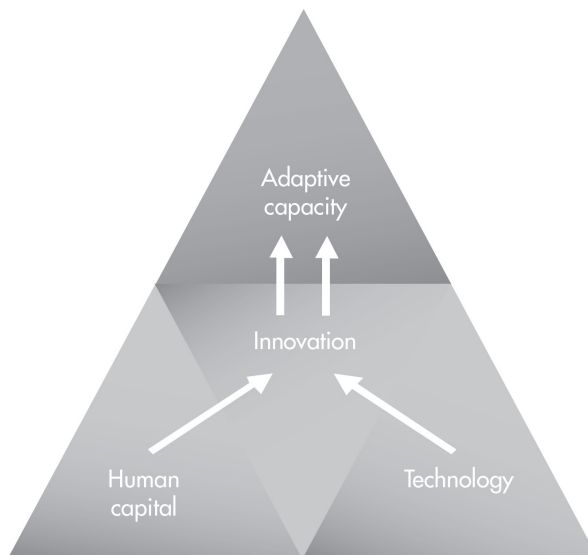
- The value of intangible resources has dramatically increased over the past 80 years, rising from a 30 per cent representation of company valuation in 1929 to recent times where companies such as Google and Microsoft have declared intangible assets to be worth as much as 90 per cent;²
- Intellectual capital has been found to account for 78 per cent of the value on the Standard & Poor's 500;³ and
- In a 2010 analysis of the US stock market performance of 79 companies across service, manufacturing and financial sectors between 1998-2003, it was found that the mere announcement of a strategy to manage knowledge resources could have a significant positive impact on an organisation's market value.⁴

The message is clear: knowledge is valuable, but the strategic value drivers embedded in the knowledge economy are hard to define. This has to be understood if an organisation is to justify investment in KM projects. What is the point in investing in KM processes unless they address strategic and operational needs? How can an organisation address KM unless it understands the drivers that impact the concept?

Economic value drivers

Without doubt, strategic value exists in developing a unique position for the organisation as it transacts in the knowledge economy – an economy that the OECD⁵ describes as having four pillars (refer to Figure 1):

- Innovation (or knowledge-creation) – As a critical factor of competitive advantage;
- New technologies – Linking technology progress to growth in productivity;
- Human capital – Seen as essential to harness the benefits of the first two pillars; and
- Enterprise dynamics – Also known as adaptive capacity, the ability to flex according to evolving consumer needs.



Fundamentally, the basis of the knowledge economy is human capital: the socialisation of human resources being a key to innovation and the development of organisational adaptive capacity. When was the last time

technology spontaneously created knowledge? Take away people and gauge how effective technology is at creating dynamic capability in the organisation.

In the view of this report, while technology is a founding aspect of the pyramid, it cannot be enabled without the intervention of people, which is why human capital (people) is seen as the pivotal aspect of the knowledge economy and an organisation's competitive advantage. To enable this and produce value-driven adaptive capacity, a constant state of development is required – the only constant for a knowledge-centric organisation is change, as Thomas Clarke infers in *The Knowledge Economy*: 'In dynamic environments highly developed learning is necessary in order to keep knowledge current; an organisation's learning capability must keep pace with the changes in the competitive environment.'⁶

This idea of an organisation's 'learning capability informing adaptive capacity' links knowledge to the learning capacity of an organisation, a concept that will be discussed later in this report.

Develop a competitive advantage

The theoretical arguments surrounding the views in the preceding paragraphs are contentious. It is not the intention of this report to bring resolution to these arguments, only to report on the concepts and use their currency to develop potential benefits for organisational KM process.

The management of resources requires a strategy to underpin the value associated with them. Two approaches dominate the KM field: the resource based view (RBV) and the more recent knowledge based view (KBV). The two are often interchangeable during discussions on the management of knowledge for competitive advantage, but the reality is that they are different. The strategy the organisation chooses is critical as the RBV leans more towards a view of knowledge as an object, while the KBV leans more towards the view of knowledge as a process.

'I feel strongly that you can't "manage" knowledge, you can only manage people, environment and information. Management needs to come to a pretty serious understanding that it only has three things going for it at any organisation; people, money and information.'

(KM, Australian Government)