UNIVERSITY OF CAMBRIDGE
Cambridge Service Alliance

Cambridge Service Alliance
Annual Report 2012

IfM MANAGEMENT TECHNOLOGY POLICY

UNIVERSITY OF CAMBRIDGE
Judge Business School

The Cambridge Service Alliance

The Cambridge Service Alliance is a unique global partnership between businesses and universities. It brings together the world's leading firms and academics, all of whom are devoted to delivering today the tools, education and insights needed for the complex service solutions of tomorrow.

About the Cambridge Service Alliance

Founded in 2010 by BAE Systems, IBM and the University of Cambridge's Institute for Manufacturing and Judge Business School, the Cambridge Service Alliance brings together world-leading organisations with an interest in complex service systems to:

- Conduct insightful yet practical research to improve the design and deployment of high-performance complex service systems.
- Create and develop industrially applicable tools and techniques that deliver competitive advantage.
- Provide an unparalleled network of academics and industrialists that share experience, knowledge and insight in how better to design and deploy high-performance complex service systems.
- Develop and deliver public and member-only education programmes to raise the skill levels of organisations.

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Joining the Cambridge Service Alliance

Industrial members

The Cambridge Service Alliance is a business-led alliance with industrial members who have an active interest in the shift to services. The industrial members are BAE Systems, Caterpillar Inc., IBM and Pearson.

The Cambridge Service Alliance will bring together up to six further companies prepared to make significant and long-term contributions to support the Alliance. Benefits of joining include:

- Challenging yet practical insights into the design and delivery of high-performance complex service solutions.
- Practical tools, techniques and methodologies.
- Education and training to enhance capabilities in service and support.
- A stimulating international network of the world's best talent engaged in solving problems associated with complex service solutions.

Academic members

The Alliance draws on members from across the University of Cambridge, initially from the Institute for Manufacturing and the Judge Business School.

Internationally leading researchers and educators will be invited to join the Cambridge Service Alliance to meet specific research requirements and the needs of industrial members.

Further information

Email: contact@cambridgeservicealliance.org
www.cambridgeservicealliance.org

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Foreword

The Cambridge Service Alliance helps companies improve the complex services they provide, by developing practical knowledge, tools and techniques from world-leading research.

The shift from products to services is challenging. Delivering the outcomes that customers really value requires working closer with both customers and suppliers, co-creating value for all involved in the service. This requires new ways of working – changing who is responsible and sharing risk and reward. Networks of organisations – sometimes including competitors – have to collaborate, sharing their capabilities to mutual benefit. Managers need to see the bigger picture if they are to deliver the services that customers demand, taking a view of the entire business ecosystem.

Managing an ecosystem requires new approaches. As you will see in this report, we have already made major advances – increasing our understanding and changing thinking in our members' businesses. Organisations are applying this new knowledge both to innovate new services and improve the management of existing ones.

In the coming year we will continue our world-leading academic research. Our growing membership means that we can apply more resources to help companies apply the tools and techniques we have developed together throughout their businesses.

The Cambridge Service Alliance achieves its goals by being open and inclusive. Our latest member, Pearson, joins BAE Systems, Caterpillar and IBM with a willingness to share its experiences and insights. Pooling this rich body of knowledge brings benefits to all who participate; we repeatedly find that companies in widely differing business sectors face similar challenges.

I hope you are as excited as we are by the work of the Alliance, and that you will join us in the rewarding shift from products to services.

Professor Andy Neely
Alliance Director

Our industrial members

BAE Systems is a global defence, aerospace and security company employing around 93,500 people worldwide. Its wide-ranging products and services cover air, land and naval forces, as well as advanced electronics, security, information technology, and support services. BAE Systems provides a wide range of military and technical services, from preparation and training programmes that ensure personnel and equipment are ready for deployment, to maintenance and modernisation services to keep equipment at the forefront of technology.

Caterpillar Inc. For more than 85 years, Caterpillar Inc. has been making sustainable progress possible and driving positive change on every continent. Caterpillar is the world's leading manufacturer of construction and mining equipment, diesel and natural gas engines, industrial gas turbines and diesel–electric locomotives. The company is also a leading services provider; Caterpillar Job Site Solutions offers complete solutions to customers that are designed to improve the jobsite performance and increase sustainability.

IBM. Throughout its 100-year history IBM has continually strived to innovate and progress. In the mid-1990s the company faced some real challenges as the Information Technology industry started to rapidly become commoditised. IBM survived and prospered by changing its strategy, and over the past decade has shifted into high-value services and software, which now account for more than two-thirds of its revenue.

Radical innovation in IBM's business model has been another example and is central to its re-invention as a globally integrated enterprise. Globally integrated delivery is now IBM's business norm, enabling it to provide services which draw on large, new pools of highly skilled specialists from across the planet.

Pearson, the world's leading learning company, has global reach and market-leading businesses in education, business information and consumer publishing (NYSE: PSO).

Pearson partners with leading institutions in areas such as college readiness, workforce education and online learning to schools and universities in North America. Working closely with Rutgers, Arizona State University, and California State Online, Pearson provides online learning technology, services and support to keep students engaged from enrolment through to graduation. Pearson helps people and institutions break through to improved outcomes by providing innovative print and digital education materials, including personalised learning products such as MyLab and Mastering, CourseConnect customisable online courseware, education services, including custom publishing, content-independent platforms, including the EQUELLA digital repository, and the Pearson LearningStudio online learning platform and OpenClass online learning environment.

Pearson: delivering value in education

Annabel Cellini
Pearson

At Pearson, we believe that learning improves lives. We believe that every student should have access to the education and educational tools they need to succeed. That access and those tools ought to be affordable and the educational system should achieve results that make students college and career ready.

We have shifted our focus from products, like textbooks, to outcomes like measurable gains in learner achievement. As a result, service-based business models are fundamental to Pearson's vision of personalized and connected learning at scale. We are delivering education directly to students globally and are partnering with educational institutions to deliver services that will capture greater value by creating broader solutions around achievement, access and affordability, and will analyze and make actionable performance data that will provide insights to help us deliver measurable improvement in outcomes.

The Cambridge Service Alliance is a centre of excellence in the understanding and delivery of complex services. The Alliance uniquely combines both research and practical frameworks that we can apply to emerging business models. We believe working with the members of the Cambridge Service Alliance will help us to accelerate the transition to services at scale and across our organization. As we make this shift, Pearson will gain insight around the likely challenges residing in organizational culture, organizational structure and capabilities, and new models for market and customer development.

Specifically, the Alliance is already helping us with professional development by raising understanding of skills required for complex services delivery, services marketing and sales, implementation management, and understanding the impact of big data in complex service engagements. We are gaining strategic and operational insight to inform the design and delivery of complex services, through shaping and by participating in practical research projects and gaining access to a community of academics and business leaders.

Working with the Alliance will provide strategic and actionable insight as well as third-party validation of our strategy. We hope to find ways to shorten the learning curve on adoption of new business models by looking at other industries and companies that have made the transition to services business models, as well as gather insight from other Alliance partners of best practices in organizational transition to new business models. We will gain practical insights into the design and delivery of high-performance complex service solutions.

In particular, we had been looking for frameworks for thinking about our business and go-to-market strategy. The work of the Cambridge Service Alliance will help us create and benefit from practical models and capabilities audits to help us think about how we can better serve and better organize to serve our rapidly evolving market.

For example, we recently used the capabilities audit to help us identify areas of focus as we integrated a newly acquired services business into our organization. We are already using frameworks, tools and best practices gleaned through the Cambridge Service Alliance Research and are keen to help in the development of more tools.

As we partner with universities in the course of our business and are intensely focused on learner outcomes, it seems very appropriate to tap into a university, and specifically the center of excellence created by the university and members of the Cambridge Service Alliance to help us gain a deeper level of insight and best practices in this emerging field of services management. At Pearson, we are committed to Always Learning.

Overview

The nature of business is changing. Customers are often no longer willing to pay for goods received, or for hours of service delivered. Instead they demand solutions, results and outcomes that are of direct value to them.

Delivering these outcomes is often beyond the resources of any single organisation. Complex networks are needed, with several players working in partnership to deliver an integrated service, sharing responsibility for meeting the customers' needs. The Cambridge Service Alliance exists to help companies address the challenges posed by designing and delivering these high-performance complex services. The Alliance develops and delivers tools, education and the insights needed for the complex services of tomorrow.

The Alliance's work focuses on three core themes:

Business models for service: how companies innovate new services and the capabilities needed for success.

Service and support engineering: how organisations gain the best value from the assets available to them.

Performance and information analytics: how networks of organisations use data to design and deliver services.

Membership

The Alliance brings together the University of Cambridge and four world-leading companies who have successfully begun the shift to services. In 2012 we welcomed Pearson to the Alliance. Pearson is a major supplier of education services to higher education institutions and professional bodies, including teaching and assessment services. Pearson joins our earlier Alliance members, BAE Systems, Caterpillar Inc. and IBM, who continue to face similar challenges as their service-oriented businesses grow.

Research

Our work on **Business models for service** looked at two aspects of business model innovation: identifying and enhancing the capabilities organisations need to successfully introduce new services, and studying the characteristics of innovation in one of the most complex environments – the 'urban ecosystems' of government, business, citizens and regulators coming together to provide public and use services. In 2013 this theme will look at integrating the Alliance's work to date and supporting the members' application of the knowledge gained.

The **Performance and information analytics** theme has helped Alliance members work with their business partners to develop performance management systems suitable for service delivery. In 2013 the theme will study how better use of available data enables companies to design and deliver new services.

In 2012 the **Service and support engineering** theme looked at the range of approaches companies took to manage their fleets of capital equipment, and the range of decisions necessary to manage these assets. In 2013 work will concentrate on how companies design their asset management systems, and how to improve the design process.

Engagement

The Alliance is unique in terms of the strength of the relationships between academic researchers and industry practitioners. This active involvement is essential, both to ensure that the research is relevant and to transfer the knowledge, tools and techniques developed together. By working with leading organisations in non-competing business sectors, the Alliance helps members benefit from a wide range of experience, in addition to world-leading academic research. In 2012 the Alliance have worked closely with all its partners to address current and future challenges, for example:

Portsmouth Dockyard: Alliance researchers led a series of workshops to help the Team Portsmouth consortium agree a shared set of performance measures that could be used to manage HM Naval Base Portsmouth.

Dealer Networks: the Alliance helped Caterpillar and its UK dealer to map the business system they operate in. As a result, they have increased their understanding of their customers' needs and identified new business opportunities.

Staff training: the Alliance supports its members to apply the tools and techniques developed by providing executive education, enabling their staff to apply the knowledge throughout their organisations.

Service Week

The third Cambridge Service Week looked at the opportunities the growth of 'big data' brings to organisations in the public and private sectors to innovate new services. Speakers from the UK Cabinet Office, Vestas, Google and IBM talked about how they have introduced new offerings. Alliance members BAE Systems and Caterpillar spoke about how Alliance membership is helping them face the new challenges.

Looking ahead

In 2012 the Alliance completed its first phase; research is well under way and its members have begun to apply Alliance research to meet their business needs. In 2013 the Alliance will:

1. Support its members to realise the value of its work, through increasing knowledge transfer and industrial engagement.
2. Continue its world-class research in its three themes.
3. Integrate its research findings, to help members introduce and improve their services in a consistent way.
4. Host the fourth annual Cambridge Service Week, looking at 'Service Innovation in Practice'.

The Cambridge Service Alliance looks forward to another successful year, bringing together more of the world's leading organisations to multiply the benefits of collaboration to address complex service challenges.

Business models for service

Michael Barrett
Research sponsor

Ivanka Visnjic
Research lead

Taija Turunen
Researcher

'Organisations often need to partner to meet their customers' needs. They must collaborate with other suppliers and sometimes with competitors to provide integrated, results-based services. They need to take an ecosystem view; understanding the needs and capabilities of their customers and other stakeholders. It requires new business models that meet the needs of all involved, and the ability to manage the inherent risks.

Michael Barrett Research sponsor

Work this year

This year's work has built on the 2011 paper 'From Process to Promise', looking at how firms innovate successful new services within a broad ecosystem, and the capabilities they need to do so. One stream, led by Taija Turunen, has studied how organisations can assess their own capabilities and how to enhance them. The other stream, led by Ivanka Visnjic, addresses how the most complex ecosystems – modern cities – take different approaches to innovating complex services.

Impact this year

The Alliance has developed a software tool to help organisations assess their capabilities to introduce innovative and successful services. Alliance researchers have applied this tool within Caterpillar Inc. and trials with other members are planned.

Plans for 2013

Activity in 2013 will concentrate on helping Alliance members apply its research to their needs. Trials of the innovation capability assessment tool will continue, helping members identify which capabilities they must improve to offer and deliver successful services. Lessons learnt from our studies of urban ecosystems will be further developed to help innovation of complex business-to-business and business-to-government services. Theme researchers will also lead the integration and application of Alliance research from all three themes.

Further reading **'When Innovation Follows Promise' Ivanka Visnjic, Taija Turunen and Andy Neely**

Urban ecosystems

Urban ecosystems offer a unique opportunity to study business model innovation. Alliance research studies how citizens and organisations come together in three of the world's major cities to deliver services and address society's problems. Cultural, political and legislative constraints mean that the cities respond in different ways to common challenges; for example, Vienna's City Government is likely to directly invest in transport infrastructure, Chicago to establish an independent trust and London to build a public–private partnership.

Urban ecosystems share many of the characteristics common to all complex ecosystems. Private and public bodies must come together to provide integrated services. Stakeholder needs are diverse, and cities are bound by legacy infrastructure. Unlike many ecosystems, data is readily available; governments, their oppositions and special interest groups provide good-quality, verifiable information. Insights from this work will benefit Alliance members as they innovate new services in complex environments.

Service and support engineering

'Transport, water, energy and the other services we take for granted depend on complex engineering assets. The consequences of failure are huge; the assets must be constantly maintained and enhanced if they are to deliver value to their owners and users. Increasingly, it is not enough to manage the assets themselves. The supporting logistics, maintenance, training and other operations must be managed as a single system. Service and support engineering provides the key to extracting the maximum value from the entire asset management system.'

Ajith Parlikad, Research sponsor

The increasing dependence on complexity engineering assets, and a recognition of the total cost of ownership through life, have led to the growing recognition of asset management professionals. An international standard for asset management, ISO 55000, is expected to be agreed in 2014 and form the basis for further development of the discipline.

While the scope of an asset management system is becoming clearer, the process to design the system, and the services it enables, remain neglected. This theme addresses that issue, by developing a design process to maximise value from the assets that an organisation owns and uses.

Work and impact this year

Initial research in 2012 concentrated on identifying the different approaches used by organisations to maintain their physical assets, and in particular how decisions are made. The study confirmed the diversity of ownership – the organisation responsible may own, lease or simply manage the assets involved on behalf of the owner or user. In all cases, safety was considered to be paramount. However, in addition to meeting asset availability and performance targets, the residual value of the asset was a key factor in maintenance planning.

Based on this work and an extensive literature study, the research team developed a framework for classifying the full range of decisions that must be made by asset managers to enhance the total value of the assets through life.

Plans for 2013

The Alliance will be looking at how companies design the asset management systems that underpin equipment-based services. It will examine how current documented processes compare with the latest practice, and the impact of the design process on the resulting service.

Further reading **'Engineering Asset Management: Issues and Challenges – Delivering business objectives by extracting value from assets'**

Ajith Parlikad
Research sponsor

Ornella Benedettini
Research lead

Challenges in asset management

As part of Cambridge Service Week 2012, the theme organised a workshop for asset managers from leading manufacturers and consultancies to discuss the challenges faced over the next five years as the new standards are adopted worldwide. The four key areas that must be addressed are:

Effective decision making. Improving decision making across the organisation, through better use of longer-term financial, and non-financial, metrics to deliver value for all involved.

Organisational changes. Organisations must evolve to enable better decision making and share knowledge and skills, breaking down silos and boundaries resulting from functional specialism and multiple cost centres.

Data capture, sharing and standards. Improving the quality and availability of the information available for decision making.

Predictive analytics. New information technologies are available to improve asset management, but several barriers currently prevent their effective use.

Andy Neely
Research sponsor

John Mills
Research lead

Mohammed Zaki
Researcher

Performance, information and analytics

'Managers need effective performance management systems to deliver valuable and efficient services. Even within an organisation, it's difficult to present the right data to the right people at the right time. In today's complex contracts, where companies work in partnership to deliver an integrated service, they depend on information from a huge range of sources within and beyond their control. Managers need new tools and techniques to use this big data to manage performance.'

Andy Neely Research sponsor

This year the Alliance looked at how organisations come together to manage the performance of complex services. Existing techniques provide the basis for managing operations within a single organisation – improving the output and efficiency of just that unit. These techniques are inadequate for highly partnered services, where all the organisations involved must coordinate themselves to improve total value to the customer, while maximising the benefits they each receive.

A shared performance management system is needed, providing a common set of metrics that all can use to deliver the service. The shared system can then form the basis of each partner's own metrics.

The research team based the new design process on 2011 research, which identified the dimensions of complex services, and of effective performance management systems, required as the service evolves through life. Researchers and experienced practitioners from Alliance members facilitated a series of workshops bringing together the organisations that deliver current and proposed services. After each workshop the process was improved and the participants developed a greater understanding of the performance measurement system they need: an approach known as action research.

Plans for 2013

The team has begun to study how the data available from within and outside an organisation drives service delivery – looking at opportunities to improve existing offerings and introduce new ones.

Portsmouth Dockyard

HMNB Portsmouth is home to two-thirds of the Royal Navy's surface ships, located on England's south coast. Alliance member BAE Systems provides a range of services to support the dockyard and ships, in partnership with the MoD, Royal Navy, Babcock, Serco and others.

Until now each partner has been responsible for managing its performance to meet the agreed targets. Faced with customers' increasing demands for integration, the Alliance organised a series of workshops to identify a common set of performance targets for all involved in service delivery.

Following the workshops, BAE Systems agreed a programme to design candidate measures to take to the contracting authority, which are expected to contribute to the renewal of the contracts.

Other Alliance research

Service revenues in manufacturing

Researchers Ornella Benedettini and Andy Neely continue their study of the financial performance of servitized manufacturers. They have been monitoring how the rates of bankruptcy compare between manufacturers who have chosen to servitize and those who maintain a product-dominant business model.

New economic models for transport in the digital economy

Technological advances and a strong business case are often not enough for service innovation. Changes must occur across the ecosystem – technology, economic, industry standards and regulatory – for widespread adoption. Mobility services provide an excellent opportunity to study ecosystem innovation. Shared-use electric vehicles have been made available across the world, with mixed success. Claire Weiller's work looks at the factors needed for success and the implications for other business sectors. This work is supported by RADMA and IBM.

Collaborative performance analytics

Researcher Nripen Kulkarni has performed a pilot study developing data visualisation tools to support collaborative decision making. Existing visualisation and analytics tools concentrate on the needs of individual decision makers. In the Cambridge Service Performance Information Lab, researchers are looking at how groups use the new tools, and how they may be improved to give faster solutions to complex, data-driven problems.

PhD research

The Alliance continues to attract and retain high-calibre PhD candidates and in 2012 welcomed Jingchen Hou to Cambridge. She is examining the role of social capital – trust and other intangible aspects of relationships between individuals and groups – in outcome-based contracts.

Ornella Benedettini
Researcher

Claire Weiller
PhD candidate

Jingchen Hou
PhD candidate

Cambridge Service Week

Cambridge Service Week is a series of events hosted by the Cambridge Service Alliance to bring together leading academics, industrialists and policy-makers to address the challenges facing service education, research, practice and policy. This year the event grew again, with participation from over 170 attendees in Cambridge from 17 to 20 September.

Partners day: performance management for complex services

This one-day executive programme introduced delegates to the new approaches and tools developed by the Alliance in 2011 and 2012 to manage the performance of highly partnered service operations. The programme gave practitioners some of the skills they need to develop performance management systems for the highly partnered service systems increasingly common in the public and private sector.

Alliance forum: strengthening the links between manufacturers' production and service divisions

Enhanced through-life services often increase revenue and customer retention, but at the cost of lower product sales in the short term, or increased production costs. This event brought together experienced practitioners from the member companies to discuss how production and service functions within a company can work together to better meet their customers' needs.

'Big data' – an innovation opportunity for complex services?

Big data – the huge growth in volume, variety and speed of data available to organisations – provides huge opportunities and challenges. Despite great interest from science and IT professionals, there have been few opportunities for strategic managers and policy-makers to discuss how big data will lead to new and improved services for all.

Our annual industry day gives participants this opportunity – to hear how leading organisations have used data to improve services, and for all participants to discuss how the growth of big data will impact their business. This year's speakers were:

- Will Cavendish, Cabinet Office
  Public Service Reform and Innovation: What role for Data?
- Matt McNeill, Google
  Big Data – Changing the Game, Enabling a New Approach to Service
- Lars Chr. Christensen, Vestas
  Exploiting Big Data for Competitive Advantage
- Andy Neely, Cambridge Service Alliance
  New Business Models and Performance Measurement
- Craig Olmstead, Caterpillar Inc.
  Building the Service Business: A Capability Perspective
- Sarah Bailey, BAE Systems
  Selecting Key Performance Indicators for Complex Services
- Stephen Gold, IBM
  The Rise of Cognitive Computing: Implications for Big Data and Complex Services

Academic Conference

This year the Alliance was proud to host the EurOMA Service Operations Management Forum, one of the leading academic conferences in Europe dedicated to service management. Speakers from around the world presented on a range of topics related to managing innovative and complex services.

Service innovation in practice

The Journey from Products to Service

Many organisations know they must make the journey from product supplier to service provider. But how do they start this journey, and what are the common challenges organisations face? Service Week 2013 will look at the practical steps companies can take to innovate better services and deliver greater value to their customers.

Challenges

Organisations start the journey with the hope of increasing revenue and profit, yet Alliance research shows success is far from guaranteed[1]; for example, manufacturers that start the transition face greater risks of bankruptcy than those that remain product-focused, and many of these risks lie within the organisation.

The reasons are unclear, but companies face many challenges. For example, suppliers may be unwilling to change the way they do business, particularly when servitized customers form a small part of their overall business. Designers are often encouraged to reduce cost at the point-of-sale, not the total cost through-life. Companies may require new governance structures to ensure they, and their business partners, deliver the outcomes that their customers demand. Increasingly, companies are held accountable for the actions of their suppliers in different jurisdictions and subject to different regulatory constraints.

Taking the ecosystem view

Radical service innovation requires changes across the ecosystem. All the actors involved – customers, suppliers, regulators and end-users – must adapt. Service Week 2013 will look at how the players in the ecosystem collaborate to create and share value as it makes the journey from product to services, and the practical steps companies can take to increase the chances of success.

Helping companies make the transition

The Alliance will look in detail at three examples of how new services have been introduced, the challenges faced and how they were overcome. Participants will hear from suppliers, customers and others involved to examine how collaboration across the ecosystem increases the value customers – and suppliers – gain, and the tools and techniques they used to identify and overcome challenges.

Booking details

The conference will be held at the Moller Centre in Cambridge on Tuesday, 1 October 2013. For more details, please see:
http://www.cambridgeservicealliance.org/events/cambridge-service-week.html

Further reading: **Why do Servitized Firms Fail? A risk based explanation. Benedettini, Neely and Swink, Forthcoming**

Innovation in Electric Vehicle Ecosystems

Technology has now advanced to the stage where shared electric vehicles (EVs) can provide an effective transport service in larger cities. Yet schemes across the world have yet to show a profit or significantly reduce congestion- of great value to vehicle users and other citizens alike.

To create this value requires multiple innovations across the ecosystem:

- Technology providers: not just new types of energy storage, but standards for recharging or exchanging batteries.
- Local authorities: who must dedicate scarce parking spaces to shared EVs, at the expense of conventional vehicles.
- Service providers: who must build a network of charging points to address the short range of current EVs.
- Users: who must give up the perceived convenience of owning their own vehicle.

Other activity

Presentations to industry and government

In addition to numerous academic conferences, Alliance researchers presented at the following conferences in 2012:

'R&D and Innovation in Services', OECD NESTI-TIP INNOSERV Conference, December 2012.

'Business Model Innovation for Support Services', Defence Forum for Market Analysts, Naples, Italy, November 2012.

'Big Data and Analytics: Managing Performance In Turbulent Times', Platon Conference, Stockholm, Sweden, October 2012.

'The Servitization of Manufacturing: An International Perspective', KDI 2012 Conference on Changes in Industrial Landscape and the Future of the Service Economy, Seoul, Korea, October 2012.

'Big Data and Analytics: Managing Performance In Turbulent Times', Platon Conference, Copenhagen, Denmark, October 2012.

'Manufacturing Business Model Innovation: The Shift to Services', BAE Systems, Service Excellence Community of Practice, September 2012.

'Innovating the Business Model to Compete in the World of Complex Services', at Innovation in Business Processes event, Royal Academy of Engineering, July 2012.

'The Challenges of Corporate Financial Reporting', Oracle/Accenture webcast, June 2012.

'The Shift to Services: Trends, Challenges and Opportunities', Alcatel Lucent, Antwerp, Belgium, June 2012.

'The Changing Nature of Service Innovation and Policy Implications', INNOSERV expert panel workshop, Paris, France, May 2012.

'The Shift to Services: Trends, Challenges and Opportunities', ABB Research Labs, Ladenburg, Germany, May 2012.

'Managing Performance in Turbulent Times', 2012 IIE Annual Conference and Expo 2012, Orlando, May 2012.

'Big Data and Analytics: Changing the Face of Business Performance Measurement', IBM Academic Day Conference, Frankfurt, May 2012.

'The Shift to Services: Trends, Challenges and Opportunities', IBM Community: Patterns for Disruptive Business Platforms, May 2012.

Publications for practitioners and policy-makers

In addition to academic publications in conferences and journals, Alliance researchers published the following:

'Engineering Asset Management: Issues and Challenges'. Briefing on the key areas companies must address over the next five to ten years, to improve the value for money they get from their asset fleets.

'E-Mobility Services: New Economic Models for Transport in the Digital Economy'. Case study describing the ecosystem-wide innovations needed for the introduction of shared electric vehicle services.

'Towards Self-Serving Aircraft: Revolutionising the Service Supply Chain'. Briefing on how intelligent assets can reduce maintenance costs and improve service in the civil aerospace sector.

'Managing Performance in Turbulent Times: Analytics and Insight'. Book showing how performance management systems must adapt to be of value in rapidly changing organisations.

'Complex Engineering Service Systems, Concepts and Research'. Book summarising research for a professional audience, from the Cambridge-led S4T project, looking at key challenges in equipment availability services.

Audio-visual summaries

Audio podcasts and videos summarising many of the Alliance's key reports and papers are available at:

http://www.cambridgeservicealliance.org/outputs/audio-visual.html

The year ahead

The year 2012 marked the end of the first phase of the Alliance; the first research projects, and the first applications, have been completed successfully. Membership has grown, spanning a wide range of business sectors and markets, which share the same challenges in the move to services.

Research and value realisation

Alliance work in 2013 builds on this success. New research projects will begin in all its research themes and existing work will continue, but Alliance growth means that it can apply more resources to support its members to apply knowledge, tools and techniques to real business problems. The Alliance will also be integrating its research to help members improve complex services through their life – from inception to retirement.

Alliance forums

The Alliance will continue its series of informal workshops for members to learn from current best practice to face common challenges. Facilitated by experienced Cambridge researchers, members share their knowledge and insights from recent academic research, to help them improve their businesses. The next forum will address accountability through the life of a complex, safety-critical, service.

Industrial briefings

The Alliance industrial briefing series brings the latest thinking on complex service systems to decision makers and practitioners. Each briefing addresses how recent Alliance research addresses current business needs, presenting key points and recommendations for a business in a complete and accessible form.

Executive education

Through the Judge Business School and Institute for Manufacturing, the Alliance delivers a number of executive education programmes designed to provide professionals with the skills they need for career and personal development. Facilitated by senior Cambridge researchers, they are designed to be stimulating, academically rigorous and practical.

The Alliance can offer executive education modules in:

- Service innovation in the digital economy
- Business model innovation: changing the game
- Enterprise performance management
- Service design thinking
- Introduction to complex services

Service innovation in practice: the journey from product to service

The next Cambridge Service Week will take place from 30 September to 2 October 2013, and looks at how firms overcome the challenges they face during the transition to service. Members and invited guests will join academics and policy-makers for a series of research, education and practice-based events designed to support service innovation and delivery.

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