

CODEXX WHITEPAPER

Why's your innovation engine misfiring?

Assessing your innovation practices to drive improvement

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energizing change

Innovation is increasingly critical to business survival

We live in times of major change driven by a combination of globalisation, rapid technology development, the accelerating impact of the internet as a platform for social and business collaboration, security threats and changes in the power balance between the East and West.

The result is a turbulent environment where businesses continually need to adapt their business models and value propositions to meet new competitive conditions. In this challenging environment the ability to *effectively innovate* is becoming a core competence for businesses seeking to prosper in the short term and survive in the longer term. At its core, innovation is simply the *creation of value from ideas* – such innovation could be new or enhanced products or services, new ways of working or a new business model for example.

The goal of effective innovation will differ between businesses – specifically due to the nature of value provided by the business (i.e. predominantly products or services), its core competencies and its competitive strategy (e.g. value or cost differentiation). The vast majority of innovation is ‘do better’ – where incremental improvement of a product, service or business process is delivered. Progressive businesses seek to have ‘do different’ innovations as part of their portfolio to provide the opportunity for major competitive differentiation (think Apple with its iPhone, Amazon with its Kindle and Echo and Dyson in exploiting its air handling and micro-motor competencies in vacuum cleaners, fans and hair-dryers).

Driving increased value from new ideas is the goal of successful innovation – and that can come from high-engagement Continuous Improvement (e.g. Toyota) as well as the occasional highly successful new offering amongst a number of less successful ‘Beta’ offerings (e.g. Google). In the last decade the internet has been used to build new value ecosystems where products have been ‘wrapped’ with value-adding services and accessories (for example Apple’s iPhone + iTunes and Android smartphones + Google Playstore). In addition internet-based businesses such as Ebay and Facebook have become platforms linking buyers and sellers to create new marketplaces for products and services. And there is increasing growth in the use of digital services to replace people in knowledge-based services and the creation of new services via internet-linked devices in the so-called ‘Internet of Things’. Businesses which have an innovation history and expertise based on physical products are now having to embrace a software paradigm – bringing new innovation opportunities but also execution challenges. So the landscape for innovation opportunity has become both larger and more complex over the last few years.

But many businesses struggle to be effective at innovation

Many businesses are poor at innovation and as a result they struggle to keep up with competitors. There can be a number of symptoms indicating weak innovation capabilities within a business:

- The share of revenue from recently launched products/services is low compared to competitors.

- New products and services typically arrive late into the market.
- The business suffers from poor service and cost performance.
- The business does not have a reputation for innovation.
- There are few signs of innovation activities across the business.
- The business struggles to attract the best people, as it is seen as less progressive than rivals

The outcome of such sub-par innovation is a combination of reducing market share, lower profitability and eventually business failure. So what are the root-causes of poor innovation performance? There are a number of challenges to effective innovation. Here are four common ones found in both product and service-based businesses:

- **Weak leadership for innovation**
Key to effective innovation in an organisation is catalysing and setting the direction for innovation. This requires proactive leadership at senior and mid-levels to encourage and support innovation activities and the use of a clear and communicated strategy to define key focus areas for innovation.
- **A poor climate for innovation**
If the culture and values within the business are too focused on the daily business and there is a low appetite for risk and doing new things, then innovation will suffer. This will manifest itself as a low level of innovation activity and thus few and low quality concepts in the innovation 'pipeline'.
- **Ineffective innovation processes**
A new product/service innovation process allows a business to effectively convert ideas into value in a systematic and predictable way. This is not easy and organisations can struggle with:
 - Poorly defined processes or no formal process (not uncommon in service businesses). The result of this is poor selection decisions and ineffective execution in bringing new innovation to market.
 - Poorly managed processes - or not sufficiently robust in adhering to the disciplines of stage-gate decision-making for major innovation projects. This typically adds cost and risk to projects.
 - Over bureaucratic approach, when only a 'light touch' is needed for 'small ideas'. This is particularly relevant for services and process innovations where it is often better to empower teams for new small and local innovation, rather than using a 'central control' approach.
 - Only covering the formal product/service development and not the critical 'fuzzy front end' of concept development and selection. This can lead to concepts entering formal product development that have not been thoroughly explored and developed – so reducing the likelihood of new product/service success and increasing the cost and risk of development.
 - Ineffective Portfolio Management. It is key to have an effective structured approach to regularly review the pipeline of innovation concepts and which to fund and develop and which to drop.
- **Disconnection from the outside world**
Too many businesses take a 'build it and they will come' approach to product and service innovation without the customer's voice being strongly enough represented in the innovation process. User-centric innovation significantly increases the likelihood of market success. Without this innovators can fail to understand user requirements and priorities due to a lack of understanding of sector requirements and user wants and needs. This can be exacerbated by the demographic gaps between the innovators and their users. Some people will point to the example of Apple as not following this

approach and yet being extremely successful. We should remember that Steve Jobs was an exemplar proxy for the voice of the customer in the Apple development process – and it seems clear that his presence is greatly missed in Apple today which is increasingly focused on incremental innovation rather than the more disruptive approach that was prevalent in the Jobs era.

The above issues (and others) can manifest themselves as problems along the stages of the ‘innovation journey’ that is made from the initial conception of an idea (which may be generated within an organisation or from outside in an *Open Innovation* approach) to value realised in the market place (Figure 1). Any difficulties encountered in this journey may slow the arrival of the new product or service in the market, lower its potential value or increase the cost of its development.

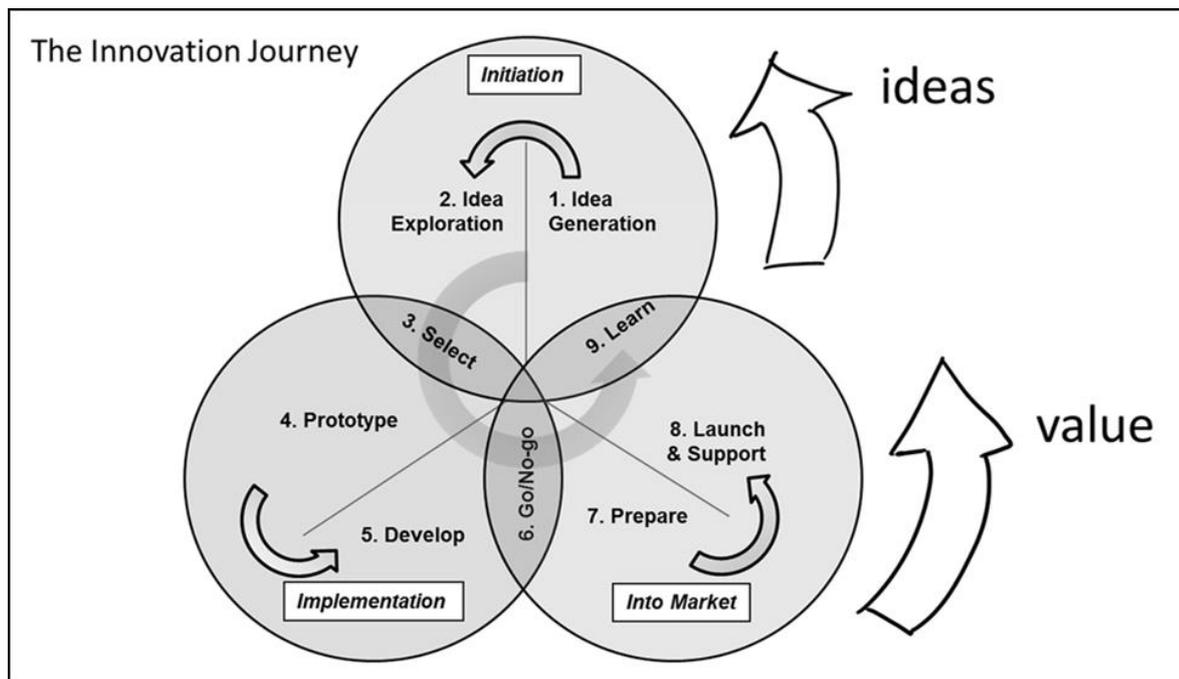


Figure 1: The innovation journey (Source: Codexx)

The need for a well-performing innovation engine

These problems are less likely to occur when an organisation’s *innovation engine* is effectively designed and efficiently operating. A business’s innovation performance is driven by its *innovation engine*. This innovation engine is built on a *system of integrated resources, processes and cultural conditions*.

This is because effective innovation depends on the combination of a number of practices in an organisation. There is no one ‘silver bullet’ to enable innovation. Instead experience and academic research has shown that a *systematic approach* to innovation improves an organization’s capability of delivering successful and sustained innovation.

Such an innovation system is built on key practices across seven areas (see Figure 2) which need to be put in place across the business, these are:

Leadership – Active support and encouragement from the top is key to establishing a supportive environment for innovation and also to focus the firm’s innovation efforts.

Strategy – A clear *vision and strategy* is needed to provide context and priorities for innovation. This will define where the firm will focus its innovation efforts with targets and supporting metrics – and also where it is not seeking to innovate because there is no competitive or commercial need.

Process – A structured and objective ideas management process is required to generate, explore, select and implement the best ideas. This helps ensure that the firm focuses its limited resources on the best ideas, rather than ‘pet projects’. Conventional New Product/Service Introduction (NPI/NSI) processes need to ensure that the critical ‘fuzzy front end’ of concept development, exploration and selection is also included – for this is critical to ensuring that the highest value concepts enter the NPI/NSI process.

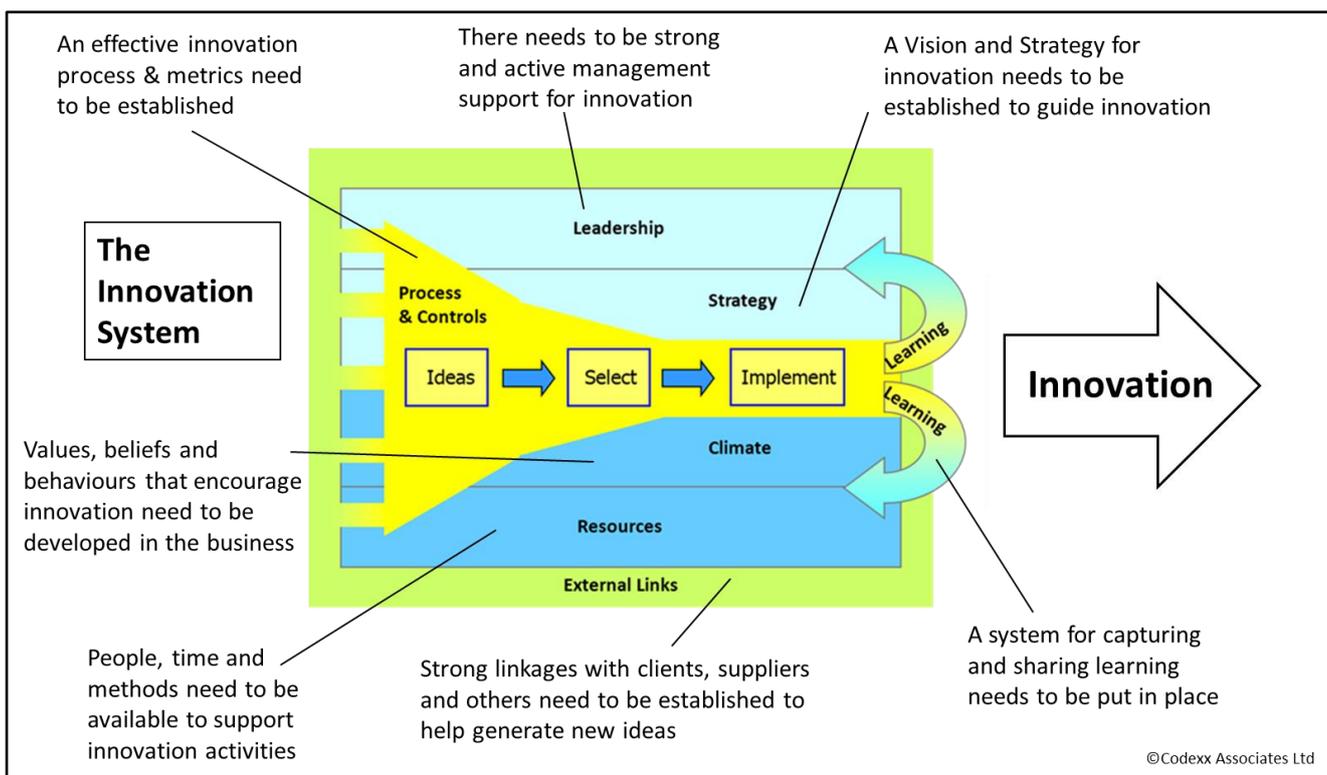


Figure 2: The Innovation System model (Source: Codexx)

Climate – A supportive culture and values are needed to establish an environment that promotes innovative behaviours. Performance metrics and recognition programmes that focus on today’s business need to be complemented by metrics and recognition programmes that encourage employees and managers to engage in innovative behaviours. Such metrics and programmes encourage employees and managers to make time for innovation and take the risk of proposing and championing new ideas.

Resources – People time, methods and money are needed to fuel innovation. In a business, making time available for employees to develop promising ideas is critical – as is recognizing and rewarding those who deliver innovation. A budget for innovation – to fund activities, training and prototyping is needed, as are some common tools and materials to enable collaborative working on innovation.

External Linkages – Effective links to the outside world, especially to customers and suppliers, for ideas and resources, are important to ensuring that the firm is focusing on market-relevant ideas and

harnessing new thinking and technologies. Engaging customers in innovation co-development also increases the likelihood of success and strengthens customer relationships.

Learning – Capturing and sharing learning from innovation across the business is key to increasing return from innovation activities – looking to where else a similar innovation can be applied and encouraging the ‘re-use’ of ideas. Process-based learning and improvement is also a competency that is fundamental to enabling continuous improvement within the business.

Assessing the health of your innovation system

An effective way to improve the performance of a misfiring innovation engine is to perform a *diagnostic assessment* of the innovation system. This diagnostic assessment reviews the key practices required for an effective innovation system and identifies weak or failing practices and defines improvements required. An additional benefit of such a diagnostic is the engagement of multiple internal and external stakeholders (i.e. employees, managers, partners/investors, customers and suppliers) in a dialogue about innovation within the business.

To help explain this diagnostic approach I’m going to use an example of the Codexx innovation diagnostic. In performing an innovation diagnostic in 2005 for a large international business we ended up using multiple tools to cover different innovation aspects such as culture, process and strategy. For subsequent innovation assessments we wanted to have a more ‘joined-up’ approach and so in 2006 we developed the ‘*Foundations for Innovation*’ (F4i) innovation assessment. To ensure our approach was robust we sought academic validity through the involvement of Professor John Bessant, then at Imperial College Business School London. F4i is based on an academically validated model of innovation described above (see Figure 2) and assesses 60 key underlying innovation practices and performance metrics to enable a quantitative assessment of innovation within an organisation.

Since 2006 we have proven the validity and the value of the F4i assessment model with multiple innovation assessments across numerous business sectors. Despite the differing nature of business models across sectors and the major changes in the technology landscape in the last decade, the fundamental practices required for effective innovation remain unchanged. What has changed is the ‘armoury’ of business tools and technologies that can be brought into play to achieve some of these practices – e.g. the use of social media for collaboration and Open Innovation, software solutions for Ideas Management and Lean Startup approaches for new offerings. We have incorporated this thinking into our assessment approach and improvement recommendations.

Innovation assessment in practice

In our experience an innovation assessment should not be seen as an ‘audit’. There is no ‘pass’ or ‘fail’. The objective is to paint a clear and accurate picture of the innovation system in place within a business today, to identify the key gaps between current and required innovation practices to meet business goals and to propose a practical path to close those gaps.

We have found that to best achieve these aims a collaborative approach should be used to engage a large number of leaders, managers and employees to have an open and honest ‘conversation’ on innovation. Innovation is a rather ‘nebulous’ activity that is not easily pinned down like other major business activities such as Production, Finance or Sales. It can mean different things to different people and for success a business needs to direct and manage innovation in ways that best meet the specific nature and needs of that business. Hence the requirement for an open dialogue in an innovation assessment to bring together hopes, fears, successes, failures, strengths, weaknesses, ambitions and challenges to accompany a robust evaluation of the key underlying innovation practices.

The F4i innovation assessment uses interviews and forums with employees and managers and a review of relevant innovation performance metrics to assess an organisation’s innovation practices and performance against a maturity model (see Figure 3). The maturity model uses a ‘template matching’ approach to assess and score the current level of practice and performance in each of the 60 key innovation areas. The maturity model thus helps organisations identify innovation weaknesses and the key improvement activities required.

Instructions: For each practice, review the three descriptions and determine the one which best matches the average situation in your firm in place today. Score 1,3,5 accordingly or 2,4 if you fall between descriptions

no.	PRACTICE	LOW (1)	MEDIUM (3)	HIGH (5)	SCORE (1-5)
1	Vision and Strategy	No documented vision and strategy for the firm.	Documented 3-5 year vision and strategy, primarily focused on financial goals but with little or no definition of goals and priorities for innovation focus.	Documented 5+ year business vision and strategy identifying key business trends and defining innovation goals and priorities. Created with the involvement of partners and employees, together with external stakeholders and communicated throughout the firm.	
2	Innovation Process	No formal process – new products and process improvements ‘emerge’ in an ad hoc fashion	Basic innovation process in place, but not well deployed across the firm	Formal process in place for generating, selecting and implementing new ideas for products and process improvement, using stage gates and supported by a management system.	
3	Leadership for innovation	Partners are not active in promoting or supporting innovation in the firm.	There are some departments in the firm where partners are active in driving innovation, but this is not firm-wide	Partners across the firm give leadership on innovation as evidenced by their involvement in, and resourcing of, innovation projects and making innovativeness a core part of the firm’s strategy and a KPI.	

Figure 3: Extract from F4i showing questions on practice maturity (Source: Codexx)

Typically we will use F4i as the core of an innovation assessment and ‘wrap it’ with other tools and methods that meet a client’s specific requirements. For example we will often use an intranet survey to gather the views of personnel or we may add specific tools for benchmarking of key elements such as R&D practices (examples are provided in the case studies later in this paper). The core report from the F4i assessment uses a ‘traffic light’ scoring of the 8 key practice/performance areas of the innovation system model (see Figure 4). We then drill down to provide scoring ‘spider charts’ for the individual practices that make up these major areas.

Accompanying this quantitative scoring are the qualitative findings based on our interviews and forums where we seek to capture the voice of the internal (and sometimes external) stakeholders in innovation. We then use the assessment findings together with our experience of effective innovation approaches to recommend an innovation improvement programme.

In our experience these assessments provide businesses with a catalyst to improving their innovation, a proposed roadmap for improvement and a high level of buy-in to that change from informed and engaged employees and managers.

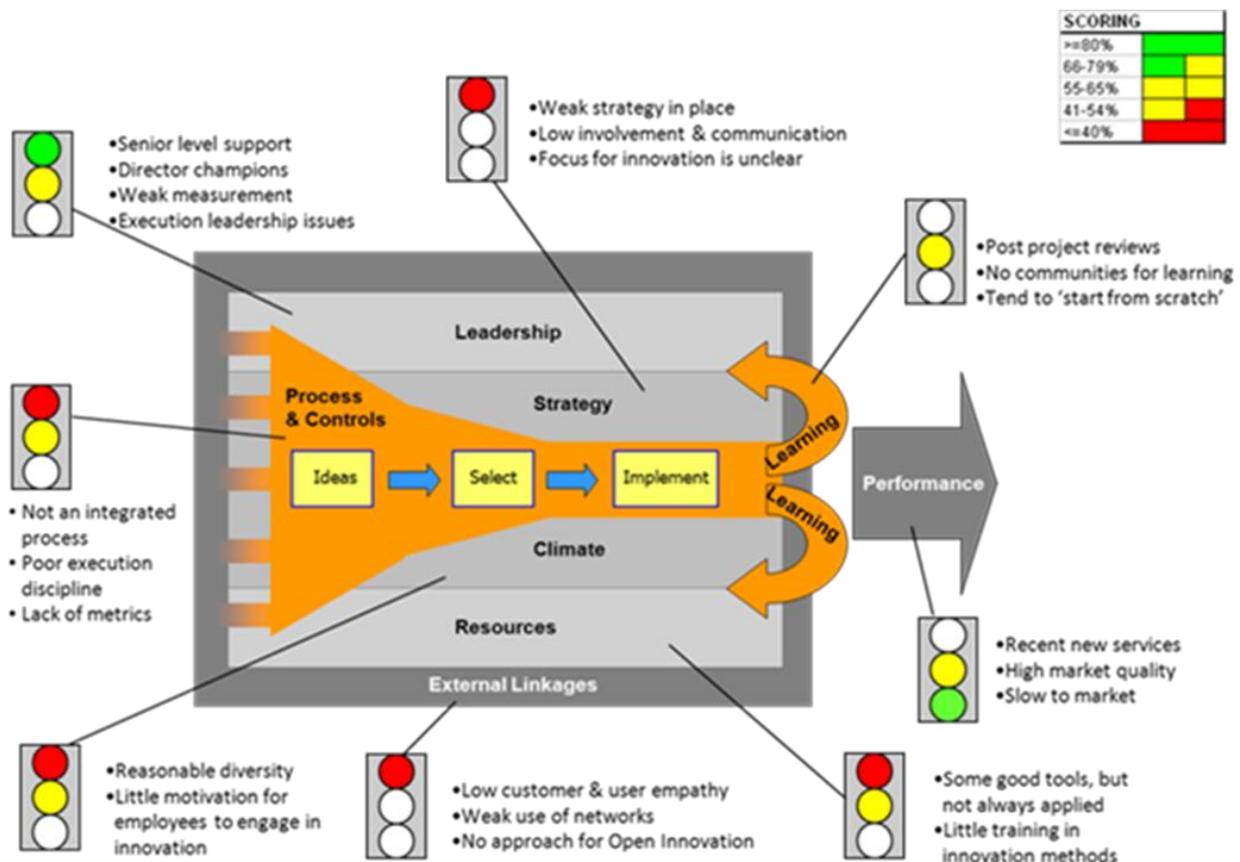


Figure 4: Example of 'traffic light' scoring against overall F4i innovation model. (Source: Codexx)

Case studies of innovation assessment

To help illustrate the use of innovation assessments in practice I have provided some short case studies of clients who have engaged Codexx to perform innovation assessments over the past decade, typically making use of the F4i tool:

Mobility products manufacturer – We used F4i to perform an assessment on the overall innovation system in operation in the business and identified issues with the NPI process, particularly the lack of a robust front end process for concept development and selection.

Law firm – We used F4i to assess and compare the innovation approaches for a law firm and its recently merged London operation. This involved forums with partners and employees and

identified strengths and weaknesses in both firms and defined an improvement path. The assessment was also used to review progress on the existing innovation development programme within the firm. We also used F4i as the core questionnaire for a study of innovation in 35 UK and German law firms in 2013-14, working with the Business Schools of Exeter and Leipzig Universities.

Insurance – F4i was used as part of an assessment of a major insurance business. Workshops were held with managers and employees in the UK operations and web-enabled workshops were held with teams from North America, Germany and Asia Pacific. 42 personnel were involved in the assessment and this ensured that we effectively captured the operation and issues of the current innovation approach. In addition F4i was used to assess another insurance business within the group to provide a sector comparison. We then recommended an improvement strategy for the firm’s innovation system.

Management Consulting – We used F4i in a pre-assessment of the core innovation practices in a management consulting business as preparation for the development of an innovation strategy and improvement programme. This helped build an understanding of the needs for effective innovation and the gaps needed to be addressed by the programme.

Global Engineering business – We used F4i as part of an R&D benchmarking project for a global engineering business covering R&D operations in Western & Eastern Europe, USA and China. F4i complemented the use of an R&D practices benchmarking tool and we also used an intranet survey of over 250 employees and managers to get views on the organisation’s R&D and innovation effectiveness. As part of the assessment we also reviewed the progress of the firm’s R&D transformation programme. We then provided a comprehensive improvement strategy and communicated the assessment findings and recommendations in a number of interactive seminars (face-to-face and online) with R&D employees and managers.

Conclusions – creating a high performing engine for innovation

Innovation can appear as a rather nebulous concept and businesses can be tempted to focus on ‘firmer’ aspects such as the NPI process, Training and Tools, Ideas Portals and such like. However effective innovation requires an holistic and integrated approach built on the key practices that make up the *innovation engine* within a business.

In our experience the use of a broad assessment of the ‘health’ of the innovation engine, using a tool such as F4i, provides a powerful way of creating a clear picture of innovation within an organisation, engaging managers and employees in a valuable conversation on innovation and catalysing improvement in defined focus areas. The net result is a business with a clear view as to its innovation direction and improvement needs and energised to make the required changes.

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About the author

Alastair Ross is the founder and Director of Codexx Associates Ltd, which he established in 2002 following a career in IBM. He has consulted globally to professional service and industrial clients for over 25 years in systematic innovation, service and process re-engineering and business improvement. He is also a visiting lecturer in Service Innovation on the University of Southampton Business School MSc in Strategy and Innovation and the University of Exeter Business School MBA programme. His latest books *'Innovating professional services – transforming value and efficiency'* was published by Gower in May 2015 and *'Sowing the seeds of business transformation'* was published in February 2017.

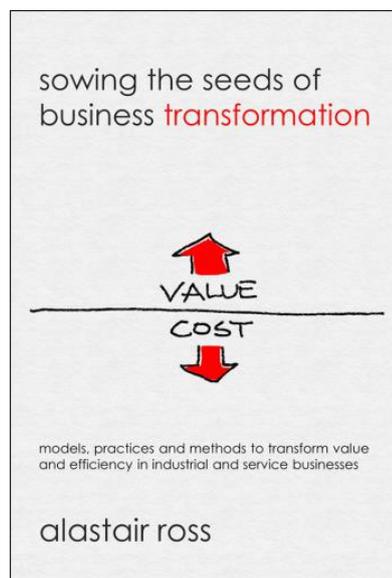
About Codexx

Codexx was established in 2002 to provide innovation and transformation services to the industrial and service sectors. It has worked with major businesses in multiple sectors in the UK and internationally including manufacturing, law, insurance, financial services, education and management consulting. For information on Codexx services and experience go to www.codexx.com.

For more information

For further information on this paper and the subjects discussed, contact Alastair Ross via www.codexx.com or by phone on +44 (0)7766-525433.

More detailed information on methods and approaches for assessing and improving innovation capabilities can be found in *'Sowing the seeds of business transformation'* by Alastair Ross.



'Sowing the seeds of business transformation' is aimed at change leaders who are seeking inspiration and guidance for transformation in their own businesses. It is a practical guide, based on project work and detailed case studies and is suitable for transformation projects in a single service or process, a function or department, business unit or firm wide.

The book examines key transformation-enabling tools and methods such as Value Analysis, Systematic Innovation, Lean, User-Experience, Re-engineering, Continuous Improvement, Services Management, Business Model Innovation and Digitisation.

'Sowing the seeds of business transformation' is available on [Amazon](https://www.amazon.com).