Benefits Identification Handbook

Benefits identification is a workshop-based 'visual mapping' technique that allows companies to explore the implications of adopting a new technology. The process is typically run within a single firm and involves a cross section of the workforce. The process identifies the functions of a given technology and then sets about mapping these onto bottom-line potential benefits through facilitated discussion. The process explores and identifies what changes the company may need to undertake to exploit a particular function (and so turn it into an actual benefit). It also explores the potential dis-benefits of the technology and related organizational changes for the firm. The process also asks broader questions about how the proposed benefits link (or do not) to the firm's overall strategy and business model.

The process is designed to encourage more rigorous and careful decision making around technology, to draw on insights from around the firm and to ensure that the right technology choices are made in the fullest possible knowledge of the implications of that choice. As well as providing new insights for decision making, the process also encourages 'buy-in' through participation.

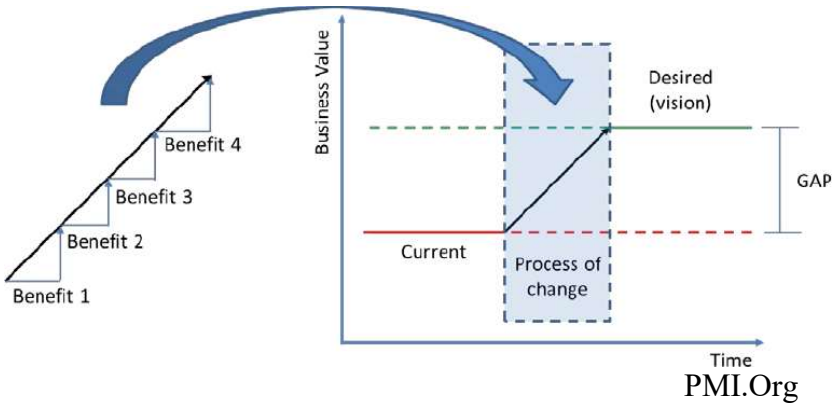
Why Benefits Realisation?

Benefits realisation, as a formal process, is a relatively recent addition to the project management battery of management tools and it can and should be a central part of both the decision to adopt new technologies and of manging the implementation of those technologies in the firm. In the UK, advice from the Office of Government Commerce (OCG) - and now from the department of Business Innovation and Skills (BIS) - has crystallised into a set of well-respected but complex and generic tools. The Cranfield method, aimed at longer term organisational development, and lean approaches like the 'Sigma' method have, emerged in response to demand from the private sector for consultancy support in strategic planning.

Benefits realisation can also be thought of as a mixture of *processes* and *tools* aimed at accessing expertise within the recipient organisation and then planning and eliciting the actions that need to occur for benefits to be tracked and realised. Project benefits are "*the flows of value that arise from a project*" (Zwikael and Smyrk, 2012: 11) and the 'benefit', rather than say a new IT system, is the '*end state*' that the project/organisation should be focusing on achieving (Simms, 2006). The successful realization of project benefits is strongly associated with strong organizational performance (Chih and Zwikael, 2014).

We have adapted these tools specifically for use in small and medium sized manufacturing firms. Our approach has been to break them down into a set of discrete activities aimed at:

1. Identifying the specific benefits that particular technologies can bring to the operation of the firm, with a specific focus on operational efficiency.
2. Identifying what organizational changes will need to be made to access these potential benefits



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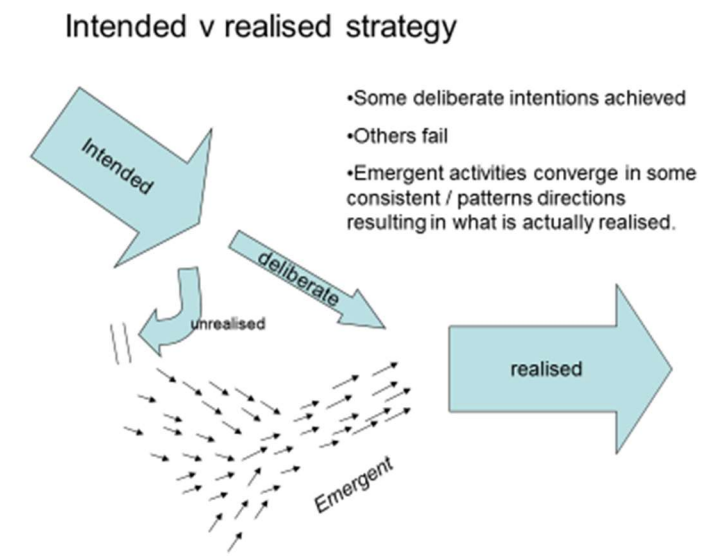
Effective tools

EC Harris (2015) argue that being benefits realisation must be *'rigorous and structured'* to prevent the benefits from being lost (unpublished presentation, 2005). Unsuccessful technology adoptions, by the same token, are associated with vague benefits realisation plans (Reiss, 2006, Lin and Pervan, 2001). EC Harris (2015) argue that the following failings are typical of such projects: "wrong set-up of the benefits case, not enough attention to measuring, no strong 'to-be' vision and agreeing with over-conservative estimations" all lead to weak gains from IS implementations. Benefits realisation is most effective when it is followed by a formal benefit management process, when the process has senior executive leadership buy-in, when senior executive support is present and the whole process is directed by a strong motivation to improve the firm (Zwikael and Smyrk, 2012). Serra and Kunc, (2015) argue that successful benefits realisation in Information Systems is underpinned by the following:

- Expected outcomes clearly defined
- Value created is clearly measurable
- Strategic objectives clearly defined
- Business case was approved
- Outputs and outcomes were reviewed
- Stakeholders were aware of the results
- Actual outcomes adhere to the business case
- Activities aiming to ensure integration
- After project closure, monitoring project outcomes continues
- Performed a process to ensure integration
- Benefits management strategy throughout the company

This list reflects good practice in project and change management generally. Arguably, however, it is questionable whether such a high degree of clarity and foresight is either possible, or indeed, necessarily desirable in benefits realisation. The rigid following of the business case, for example, may stifle the process of identifying new benefits and needed organizational change. It also encourages the system provider to take a 'not in the contract' approach; ideally, technology providers should be encouraged to see delivering valuable business outcomes as the goal, not just the delivery installation of the technology. Benefits realisation, in accordance with OCG/BIS guidance, should be an ongoing, process that also helps the project, once delivered formally, to uncover benefits that were not apparent in the business case and prevent dis-benefits (negative consequences of the project) taking hold by identifying them and 'managing them out'. Strategy 'as planning' assumes people act rationally, that they interpret information and events objectively and weigh up pros and cons, and respond accordingly. Mintztberg and Walter (1985) - in Boddy, 2003) suggest instead that strategy is an 'emergent and adaptive' process in which people respond to unexpected opportunities and unforeseen occurrences. It is valid to start out with plans, but invariably these will have to adapt to changing circumstances (Suchman, 1986). Thus, Mintzberg and Walters distinguish *intended* and *emergent* strategy (see Diagram 2. Adapted from Boddy 2003 and based on Mintzberg's idea of emergent strategy). Benefits realisation may itself drive the project in new unintended directions.

Diagram 1



Boddy, 2003

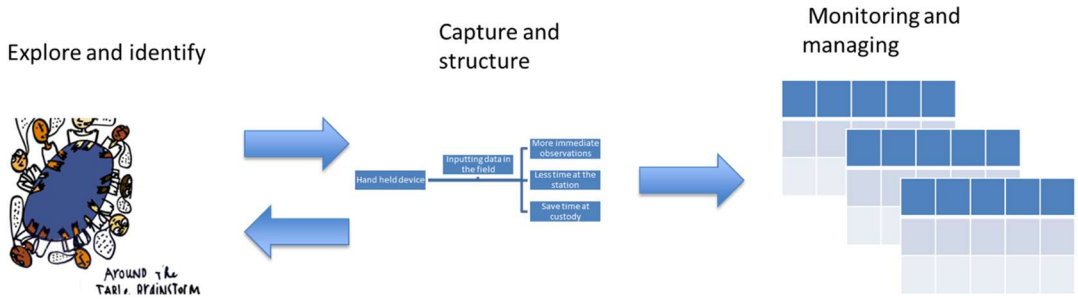
It follows that a degree of pragmatism and good sense is important when developing benefits realisation processes and management tools for any given technology project. Tools should act as a means of orientation and navigation that reflects the specific terrain, it should not be a fixed intractable map. Rigidly enforcing a plan that has gone of date will reduce 'buy in' and draw energy away from the project.

For a benefits realisation process to be fully successful it needs teeth as well as buy-in. Benefits need to be rigorously "identified, quantified, tracked and measured" (Simms, 2006). This is achieved

through a series of specific processes and tools. Our view is that the tools should be built from the processes, by the firm in question, rather than being 'handed down' from external agencies in a generic form. The tools should embody good practice in such a way as reflects the needs of the project and organisation in question.

First steps: organising the process

The benefits realisation process can usefully be viewed as three distinct activities. These activities may be repeated in different phases of a planned benefits realisation project. Indeed, the Cranfield process model argues that benefits management is a continuous process (Badewi, 2015). Once technologies of interest have been identified, workshops should identify the benefits that the firm should be orientating itself toward fully exploiting. We use workshops to ensure as much input as possible and visualise the results as a visible map in real-time. Later these can be translated into management tools (benefits registers and benefits tracking tools). These different activities can be re-used to check, reassess and refine the benefits realisation process.



Tool 1: Identifying benefits

In order to identify the business benefits that can be gained from any given technology time must be spent within the organisation working together collaboratively to facilitate the exchange knowledge, experiences and insights. A wealth on knowledge that is relevant to strategic choices and their execution often remains untapped and distributed across the workforce and layers of management. Structured workshops, brought together to discuss new technology, are the best means of bringing out and capturing this knowledge. Organisations must build a 'design mentality' when engaging with new technology.

There is a wealth of literature on running productive workshops that we will not dwell on here. What is critical is that senior managers and professionals are fully involved and that their focus is on ensuring any projects subsequently untaken are needs-driven (Peppard, 2007). The benefits realisation process should ideally begin before procurement. Moreover, the benefits realisation process should be

rigorous and well-designed enough to be capable of showing that a planned procurement is unnecessary or that it will not meet objectives suited to the organisation's strategy.

Pre-session work.

Participants should have identified a technology or technologies they interested in procuring or have already procured but not yet installed or have not fully taken advantage of it, if already installed.

Workshop design

This workshop session(s) should involve as many staff as possible, from the shop floor to senior managers, who may be able to offer strategic or work-related insights into how specified technologies might bring benefits to the company.

The technology being discussed should be broken down into what it actually does in functional terms. Such as:

- Gathering temperature data
- Processing temperature data and auto-adjusting a process
- Auto-filling forms for new parts
- Automatically feeding steel rods
- Machine wear sensors
- Data sharing between existing systems
- Diagnostic software for fault analysis
- A handheld device that displays process data to workers outside of the control room

In each case, it is the function of the technology that is important, what it actually does. What is ultimately achieves for the organisation will be almost entirely dependent on the organisation successfully adapting to it.

Capture and structure

At the core of benefits realisation is the particular way in which workshop discussions are captured – discussions should be mapped visually for the whole room to see as the discussion is ongoing.

Discussion of the technology

In the workshop a large white board is an essential tool (flip charts are too small to capture the many interactions and linkages we want to engage with). Using a white board, each key function of the technology should be noted and visually linked to clearly defined benefits. Note that functions are not necessarily benefits and that benefits are not the same as functions. For example, being able to send live process data to handheld devices means that control room staff can be outside of the control room. But this is not a benefit, unless it is exploited in some way. Closing or reducing the space needed by the control room, control staff double up as shop floor supervisors, fewer stoppages, reducing head count, better quality control may all be potential benefits that could link to the function of having access to process data on hand-held devices. However, gaining access to these benefits of course also requires undertaking some form of organizational change, this should also be recorded along with

how the benefit supports the companies competitive strategy. If there is no link to strategy then there is no real benefit. Mapping is important because a single function can give rise more than one potential benefit –we need to 'map' these visually for the workshop group to see, discus and debate. Different benefits may also interact. The map, as a collaborative device, reflects the conversation taking place in the room *and* stimulates further insights.

Functions should link left to right to proposed benefits and then to what business change needs to occur to exploit this benefit.

Maps are visualisation tools that exploit the way creativity works – one observation triggers another in linear sequence but while capturing and displaying multiple interactions and linkages in a multi-linear way. Maps quickly capture a shared view of a complex reality. Good maps draw on existing knowledge to maximise the benefits of existing systems and to make less likely poor investment choices (Peppard, 2007). Maps must always be 'solution oriented', that is to say, they do not identify barriers to attaining particular benefits, but identify what needs to be done to achieve those outcomes.

Benefits realisation maps are structured so as to keep the map grounded in organisational/stakeholder need. The key factor determining the structure of the map is the particular nature of the business driver (Peppard, 2007). Peppard, using the Cranfield method of benefits realisation mapping, identifies three main business drivers:

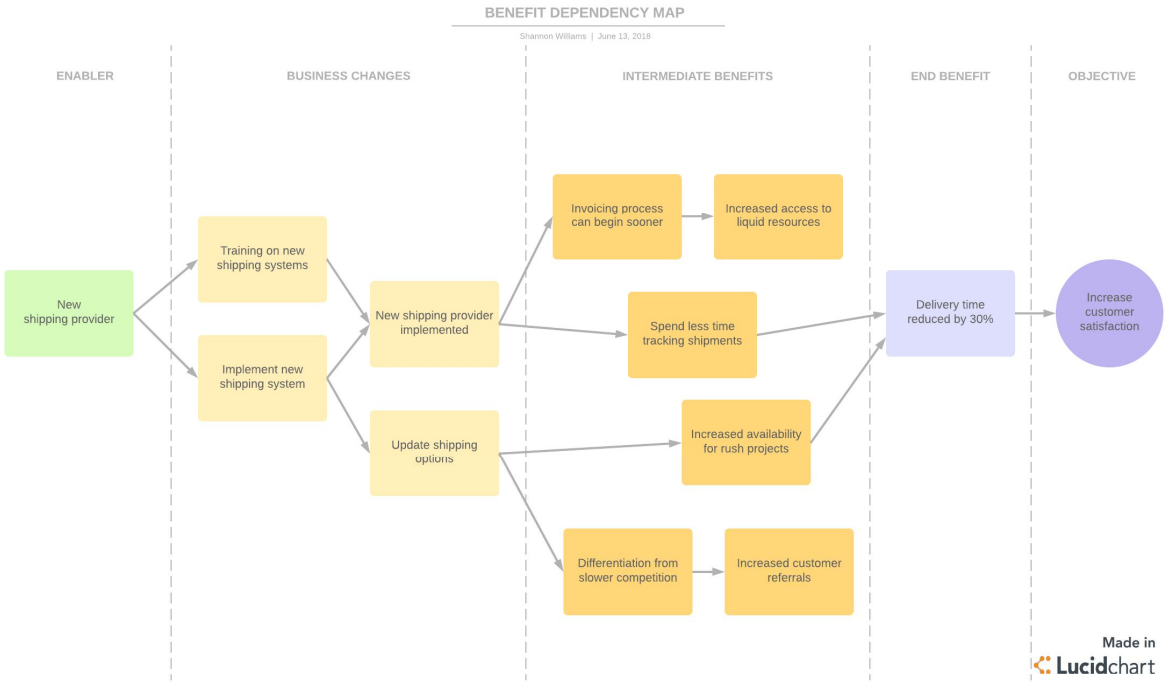
1. Mapping that considers how technology might solve existing problems, such as process bottlenecks.
2. Mapping that considers how technology might support new work design.
3. Mapping that considers what organisational innovation might be gained from an improved industry 4.0 capacity.

The basic linear structure of the map should be agreed (or pre-agreed) and then paths added from left to right to create new detail and new links.

Diagram 2

As the map develops it should stimulate further discussion and contribution – hence the ideal environment for their creation is a collaborative workshop. Each path begins with the specified output of a system and should end ultimately by connecting with the strategic objectives of the organisation.

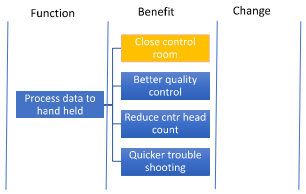
As the benefits map progresses it should begin to look something like this:



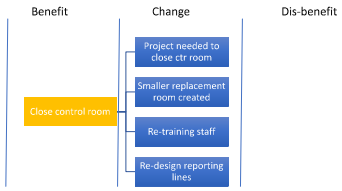
The map above is a tidied-up representation of what would have initially been drawn by the workshop facilitator on a large white board. The heading in the columns would depend on the needs of the organization in question.

Examples of the sorts of linkages that emerge during workshop discussion are given below:

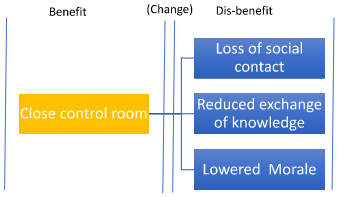
1. What are the potential benefits of any given function?



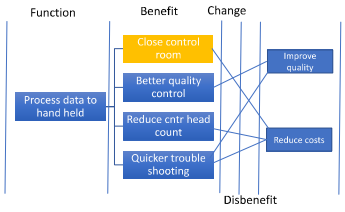
2. What are the organizational changes needed to realize the benefits of technology?



3. What are the potential dis-benefits of that change or function?



4. Do benefits fit with or even change the organizational strategy?



The downside of mapping in an open forum is that while it creates positive energy and triggers input, it can be 'overly' positive - drowning out important concerns. There may be a lack of discussion, for example, on the potential negative impacts on the pay and working conditions of some groups, the likely effects of varying automation on job satisfaction or the quality of the work being undertaken. Employee resistance can be an import barrier to successful technology implementation (Bunduchi Weisshaar and Smart (2011). Professional facilitation of workshops can help over-come this. As noted, allotting time to reflecting on what might go wrong, or where benefits may be over-estimated may also help.

Any map can only be seen as reflecting the dynamics of a particular group on a particular day and so should be treated as contingent on that.

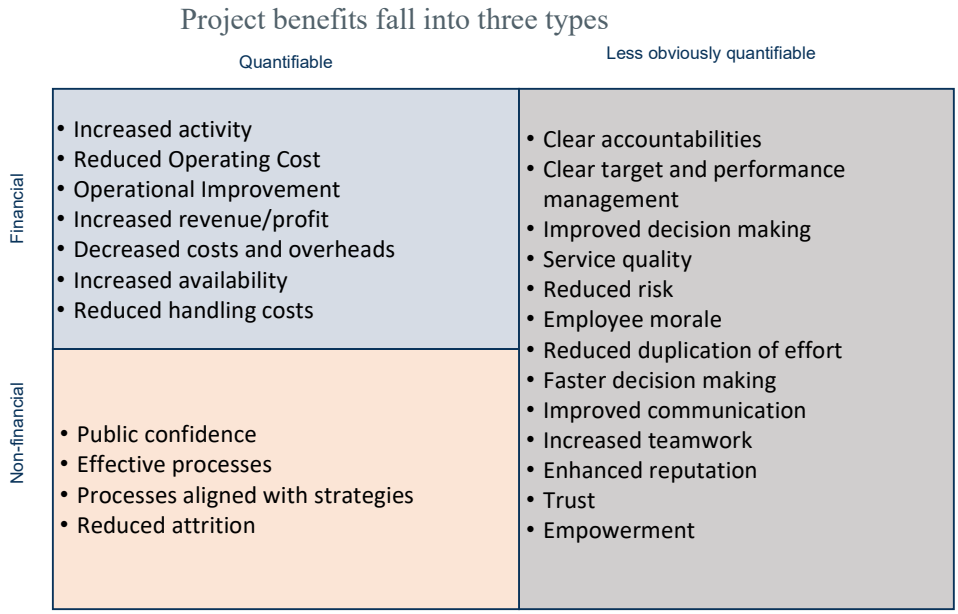
Just to be clear - what is a benefit?

The BIS (2010) suggests four useful validation tests (the DOAM tests) that a benefit should pass. These are:

- Description: Is it clear what precisely the benefit is and who 'owns' it?
- Observation: Are there verifiable differences that should be noticeable between pre-and post-programme implementation?
- Attribution: Where will the benefit arise? Can this programme claim its realisation? Is ownership of delivery of the changes and outcomes that will enable the benefit clear and agreed?
- Measurable: Is it possible to quantify the benefit (in financial terms where possible)? Can sensitivity analysis be applied? E.g. best-case, most likely, worst case? How and when will the achievement of the benefit be measured?

All of the activities required to deliver benefits should be identified clearly and the focus of the whole process should be always on Desired Business Outcomes (Simms, 2006). The underlying point is that benefits should not exist in a vacuum, but should link to the 'bigger picture'; the direction of travel and focus for the organisation. The benefits realisation process, if carried out earnestly, should, therefore, lead to change in the organisation (better process, re-allocation of resources, even a re-distribution of decision making).

Benefits come in different forms and with different time-horizons and measures. Benefits can be financial, they can go direct to customers (improved services), they can be productivity/efficiency related, they can increase competitiveness and improve in-house capabilities and they can also reduce organisational risk (Simms, 2006). Benefits can also be immediate, medium term and long-term. While short-term savings can be immediate and easily measurable, longer-term benefits are typically more related to amorphous outcomes like increased competitiveness, strategic re-positioning or competency buildings. The later are also more difficult to measure and may require 'proxies'.



Good practice (e.g. OCG/BIS) suggests that benefits, once identified should be classified as short, medium or long term.

However, our research suggests that three other important types of benefit-related change can be identified:

1. Incremental (benefits will accrue without intervention beyond training (e.g. auto-fill makes forms quicker to fill in, automatic updating of files)
2. Modular (contained within the existing organisation structure so can be dealt with by the existing command and control structure)
3. Structural (more far-reaching changes required in terms of organizing how work is done that may change, for example, relationships with other firms and partners). Here a distinct change project is required.

Clearly, 'depth' of impact will be related to the time line (short, medium, long) for each benefit. These can be mapped against one another. Further reaching impact does not necessarily mean a longer time horizon. Indeed, structural level change may be prioritised for any number of reasons (e.g. the demands of funding cycles to get larger jobs under way).