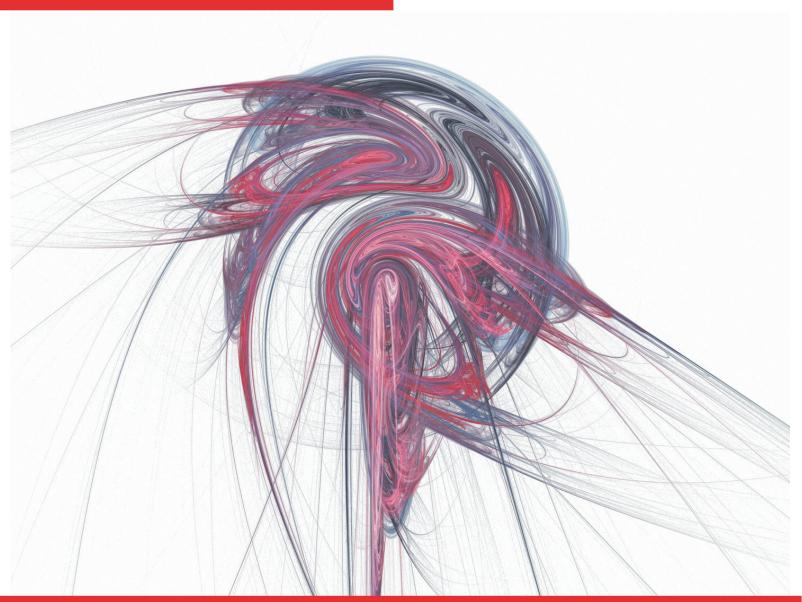




Benefits Realisation for Healthcare

2009 Progress Report



Health and Care Research and Innovation Centre

HaCIRIC is providing a strategic capability that helps create the tools and processes to embed innovation as normal business throughout healthcare infrastructure suppliers and users.

HaCIRIC

The Health and Care Infrastructure Research and Innovation Centre is a collaboration between existing research centres at Imperial College London and the Universities of Loughborough, Reading and Salford. Additional partners from other universities, industry and the care system are involved in specific research projects. Together this represents a resource valued at more than £10m, of which £7.2m consists of EPSRC support and £2.9m is from the four existing research centres.

HaCIRIC's focus is on the underlying built and technical infrastructure for health and social care, and the interaction between this infrastructure and change and innovation in care services.

The centre's purpose is to deliver research findings which will be instrumental in ensuring this investment achieves its full potential by improving the way infrastructure is planned, delivered and managed.



The collaborative and multi-disciplinary nature of our research team is a critical success factor for generating new knowledge in a way that is marked by creativity, robust analysis and theoretical underpinning.



Imperial College London







www.haciric.org







The BeReal $^{{
m \ C}}$ project team would like to thank our

Research project collaborators and members of the Advisory Group

They have been instrumental during the development of this project















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Welcome

Following the emergent importance of benefits realisation applied to healthcare infrastructure and service development programs, HaCIRIC has undertaken a research initiative targeting the development of a robust and comprehensive Benefits Realisation (BeReal[©]) process. The resulting model is focusing on how benefits should be elicited at the initial strategic stages, and how benefits should be deployed, managed and traced along the lifecycle of a programme so their realisation contributes to successful health outcomes.

Subsequently BeReal[©] aspires to be an appropriate method to drive and control the programme plan; providing tools and techniques for defining specific benefits. It also allows the measurement and evaluation of the extent to which those benefits are delivered.

We have set ourselves the objective of identifying current best practices and demonstrate how to improve benefits realisation in healthcare infrastructure provision. The HaCIRIC team in active collaboration with leading industry partners have undertaken various case and comparator studies not only to define a business critical process but to set out an ideology which places benefits realisation at the heart of securing wholly integrated (collective) change.

We believe that to deliver consistent high quality infrastructure and services within an ever changing investment model requires a different level of thinking and understanding towards benefits realisation. The challenge of answering community needs through intelligent investment in infrastructure is complex and demands a deeper and inclusive awareness and appreciation of how to deliver benefits and effectively allocate resources. The BeReal[©] initiative seeks to contribute methodologically and intends to help spending money intelligently, working with programme and project related stakeholders, securing that the best possible benefits are obtained for the overall healthcare communities.

This report highlights selected performed initiatives and summarises BeReal[©] process's major characteristics, covering far more than the follow-up of a competitive tendering process and of the development of a traditional business case. BeReal[©] copes with a detailed definition of changing activities, breakdown of (needs into) benefits that drive the investment, supports decision-making, proposes the development of controlling initiatives and suggests major awareness to the implementation of corrective actions.

We seek to continue innovating, stimulate learning, contributing to an increase of health and care performance that properly answers to community needs and intelligently invests public and private resources.

> Professor Mike Kagioglou Director, HaCIRIC

Why the need for benefits realisation in healthcare

Those people who, like me, have been around the health sector for a considerable time will be aware that the service is littered with schemes that have failed to deliver the benefits anticipated at the start of the project or during the design phase. Perhaps, and even more importantly, we are all sadly aware of projects that have been undertaken without even exploring the potential benefits that could have been delivered had the teams concerned set out along the right path at the start. In some ways, this latter syndrome is even worse and is typified by the simple replacement of outdated building stock without any attempt work to identify improvements or benefits that could be delivered for patients and staff. This reality is an incredible indictment of the system that has allowed this to happen.

It is arguable that the NHS in England, in which I work, has confounded the challenge to deliver the maximum benefits through devolution and the creation of a large number of autonomous organisations. However, my experience tells me that the situation is no worse today that in the 1980s when, based in that private sector, I started my career of delivering improved facilities for patient care in a very centralist command and control environment. Sadly there was a record of design development and construction on the basis of "we know what's good for them" by teams that were several tiers removed from the practitioners and to whom it never occurred to consult with the patients or public. The result was usually facilities that did not meet the local requirements.

In recent years it is demonstrable that health sector clients, employing the design and construction sector, have not applied that same rigor to planning for and ensuring the delivery of, realising, benefits as other sectors including retail, pharmaceutical. Indeed the problem has been wider than just the health sector as demonstrated by the decision by the Governments to introduce, in 2000 following the Gershon Review, the OGC Gateway Review process that focuses on benefits realisation at every stage of a programme or project. The Gate 5 review occurs during the operational phase of projects specifically to identify whether the anticipated benefits have been delivered.

The situation is improving in the NHS in England because of a number of initiatives. Within the NHS the review by Lord Darzi and the subsequent changes to the planning and delivery of new models of service has ensured greater rigor. There is now a clear requirement to review models of service and to aim for the most effective and efficient models of care. We should no longer see the unquestioned like for like replacement of services or the buildings that contain them. Additionally in the development of the BeReal[®] model we are seeing successful collaboration of leading academics with NHS practitioners and the industry that delivers new patient care environments. It is a successful partnership that provides the health sector with appropriate tools and techniques to identify capture and deliver benefits in the projects that are needed to support patient care. The collaboration has spanned the primary, community and acute care environments demonstrating that the BeReal[®] approach brings huge benefit wherever it is applied.

The NHS faces huge challenges in the current fiscal climate. There is, as never before, a requirement to deliver high quality, effective and efficient patient care coupled with a requirement to have efficient effective buildings that support that care.

I believe BeReal[©] is a powerful model that is available to assist all of those engaged in delivering new patient care environments to achieve these objectives and in doing so demonstrate that good value is being obtained from the investment.

Rob Smith

Head of Gateway Reviews and Director of Estates and Facilities Management, Department of Health

Benefits realisation in the public sector

For many years now there has been increasing awareness amongst those responsible for oversight and implementation of projects and programmes of the need to focus on the identification of and achievement of planned benefits. At the time that HaCIRIC initiated this work we were aware, however, that there was a gap between the aspirations and reality of the use of benefits realisation management and processes in the public sector.

As a Director in the National Audit Office I am acutely aware that the value for money of public sector projects and programmes depends on the planned benefits being achieved in a cost effective way, and on these benefits outweighing any disbenefits. Activities to identify and realise expected benefits have often, however, been carried out in a perfunctory way. I have seen little systematic follow through to drive forward delivery of these benefits and to measure what is actually achieved. And it is rare for any unanticipated benefits or disbenefits to be captured in a systematic way.

Cultural and management issues, often leading to inadequate attention to the operational stage of programmes and projects, are partly responsible. In part the problem is also because of systems and processes which focus on the procurement stages, lack of knowledge about how to undertake benefits realisation, and difficulty in establishing effective benefits realisation and management processes in the absence of detailed guidance and tools. Scrutiny and evaluation of capital projects is usually focussed on factors which are easier to understand and measure such as delivery to time, build quality and cost. But an ongoing focus on achieving desired services and outcomes is needed if the expected value for money is to be achieved over the life of a project or programme.

To help achieve a fundamental change in this area HaCIRIC has been focussing intensively on how to help those involved in the delivery of healthcare infrastructure at different stages to put benefits realisation management at the forefront of their activity and keep it there.

The resulting BeReal[©] research has developed significant insights into relevant issues as well as producing valuable methods and tools to help achieve improvements. A talented and motivated research team has developed a collaborative system which can help those involved in different roles to identify and manage benefits and disbenefits throughout the life of a programme or project, despite the likelihood of change over time in the external environment and internal objectives.

I have no doubt the BeReal[©] research will facilitate a more proactive approach than I have usually seen which would undoubtedly improve the achievement of planned benefits and value for money.

Patricia Leahy Director, Private Finance Practice, National Audit Office

Introduction

This is a progress report of the Benefits Realisation (BeReal[©]) research project undertaken by the HaCIRIC team at the University of Salford. The report summarises the research journey and its main findings during the past three years.

In the past ten years benefits realisation has emerged as a method for helping organisations manage the lifecycle of programmes from development, construction and facilities management, to operations management. Its visibility and use as the 'new' practice for private and public sector infrastructure programmes, including healthcare, housing and education, has grown. Benefits realisation differs from traditional investment appraisal approaches, by actively planning how benefits will be managed, measured and realised by stakeholders.

Because of its emerging importance and potential for application to healthcare infrastructures and services, we have established the BeReal[©] research initiative within HaCIRIC. We are developing a benefits realisation process to meet the demands of the healthcare sector by promoting continuous improvement and organisational learning

This report includes a:

- Summary of the literature review on benefits realisation and management approaches;
- Summary of the key ingredients that formed the basis for the principles for the development of the BeReal[©] model;
- Introduction of the BeReal[©] model and its three views (High Level, Process Lifecycle and Resource Based view);
- Scope, activities and findings of the three main cases studies.

Research aim

The aim of this research is to develop new understanding on the use of benefits realisation management in the context of the built environment and healthcare operations management. This new understanding fosters and emphasises the development of benefits realisation management tools that embrace self-checking processes and improve process visibility. The work is situated within HaCIRIC's Core Collaborative Area (CCA) 4: *Design and decision making*.

Research objective

BeReal[©] focuses on the identification and elicitation of benefits throughout the development stages of infrastructure programmes. This includes the establishment of how benefits should be managed, traced and deployed within a programme's lifecycle. In addition BeReal[©] provides an appropriated method to drive/control the programme plan and for defining specific benefits.

Overarching research questions

- How to introduce a benefits realisation approach for developing and delivering infrastructure and healthcare services?
- What are the current practices and problems related to realising the benefits of infrastructures and healthcare services?
- What model of benefits realisation could help address the problem and goes beyond current best practice?
- What is needed for the successful implementation of a benefits realisation approach?

Contribution to knowledge

BeReal[©] will help to focus the discussion around the wider benefits realised by stakeholders, not only those based on costs and traditional characteristics of the investment. It will show how the wider changes in built environment and organisational aspects of healthcare can be comprehensively evaluated. It will also enable better involvement of stakeholders in managing expectations, objectives and results throughout the built environment lifecycle. We will enable dissemination of BeReal[©] emerging knowledge through a web portal.

Notable achievements

BeReal[©] has been used as part of the decision making process in our current case studies, and partnering organisations are supporting further development of the model to reach out and include other sectors such as housing and education. Major achievements to date include:

- Use of the BeReal[©] model for selecting design options for the new 3Ts (Trauma, Tertiary and Teaching) hospital development in Brighton.
- Use of the BeReal[®] Model for formulating a benefits management strategy to be included in the full business case of St Thomas's Community Hospital in Stockport and participation of the BeReal[®] team in OGC Gateway 3 review.
- Bringing together a traditionally fragmented community within various NHS organisations through workshops
- Questionnaires and interview protocol used to link outcomes and customer satisfaction to planned benefits for MaST LIFT
- Established research project collaboration with MaST LIFT, Stockport PCT & Brighton and Sussex University Hospitals NHS trust

Lessons learnt

Stakeholder diversity involvement highly contributes to the appropriate elicitation of benefits (including dis-benefits and costs) covering comprehensively the real impact of the investment.

Effective communications is a decisive aspect of the change program, contributing to an increasing transparency and facilitating expectations management across the diversity stakeholders

Benefits Segmentation highly contributes to analysis of fragmented data into information that emerges from field surveying (dis-)benefits elicitation initiatives, according to similarity and dissimilarity criteria.

A three tier approach in categorising benefits has emerged in order to support the initial justification of the need (1st level, *strategic benefits*), to support the weighting decision-making process (2nd level, *sub- benefits*) and developing monitoring (3rd level, *end-benefits*) under an integrated controlling lifecycle approach

It is essential to clarify the relation between (dis-)benefits and resources, assuring that recourse utilisation/allocation will targets maximisation of benefits

Senior management support highlighting the importance of a benefits driven approach to justify investments is essential for its successful implementation

Project methodology

This research involves an action research approach. Five programmes in different phases of development are being investigated. Focus groups have been used to elicit and structure benefits. Data collection has been through questionnaires and semi structured interviews. Qualitative and quantitative methods are being used to analyse the data. Validation is through workshops with an advisory group formed by academics and industrial partners.

A list of academic publications and reports that document in more details the *extensive literature review, benefits realisation approaches comparison, research methodology, case study structure, and findings* can be found at the end of this report.

Benefits management & realisation considerations

The benefits realisation approach was first introduced in IT systems projects in early 1990s. Today, benefits management and realisation is becoming an important element of project and programme management.

Reiss et al (2006)¹ in the handbook of Programme Management describe that a common characteristic of many unsuccessful programmes is the vagueness with which the expected benefits are defined. Without clearly defined benefits, it is difficult to maintain focus when subsequent problems occur.

The costs of undertaking programmes are real and immediate, while the benefits frequently only occur after the programme is completed and implemented. Furthermore, the people responsible for actually delivering the benefits are often different from those responsible for directing and managing the programme itself.

This is even more evident in the case of Healthcare Capital investment programmes due to the huge diversity of the stakeholders involved and the different levels of activity and decision making that such programmes go through prior to their completion. As a result, it is only when the expected benefits are fully defined, understood and agreed, at "The BeReal[©] programme has brought together a range of partners to consider the value of new developments and to help them consider how to improve NHS productivity. As we move forward with system reform that seeks to put the patient at the centre of services it will be essential to harness tools such as the BeReal[©] model to evidence service quality improvement and improved outcomes for service users through the provision of built environment solutions for health and social care".

Ged Devereux Senior Strategy Manager Health and Regeneration Manchester Joint Health Unit

the start of the program, that the investors and policy makers can be confident that the investment is more likely to be successful. This understanding must be supported by mechanisms to measure the benefits and with procedures for monitoring, reporting and, most importantly, responding to their achievement or non-achievement.

Various systems and approaches of benefits management and realisation have been developed since its introduction in early 1990s, to address the issues highlighted earlier. What follows is a matrix that brings a list of such major considerations brought by different authors, for managing and realising benefits. The matrix also introduces what has influenced the thinking when developing the BeReal[©] process and its key principles.

¹ Reiss, G., Anthony, M., Chapman, J., Leigh, G., Pyne, A. & Rayner, P. (2006) Gower Handbook of programme management, Gower Publishing.

Ensure outcomes are related to strategic objectives Clearly define benefits at the outset X	2 W	Mantzana & Tl Farbey et al 1	Bradley 2006	Barlett 2006	Ward & Daniel 2	2002 3002 2002 S002	Eox 2008 OGC 2002	Ward & Griffiths	8661 ThorT	Sakar & Widesta	Кетепуі & Sherw	OGC 2003	7002 anya	Reiss et al 2006	Farbey et al 1999	S002 dISI SHN
	_			×	_	^	×	_	×							
						^	×		×							
Ensure stakeholders are committed in realising benefits x						×	×			×						
Ensure stakeholders will search for opportunities to maximize benefits						^	×							×		
Drive the process based on measurements x						^	×									
Track and report realisation of benefits and other achievements						^	×									
Use expected benefits as a roadmap for change						^	×									
Align programme benefits with stakeholders strategic objectives	×			×	×	×	×									
Ensure stakeholders are aware of and agree to face disbenefits x x	×						×	~								
Track disbenefits in order to reduce their impact							×	×								
Identify the nature of benefits through classification (enabling deeper analysis)	×		×													
Include assessment on intangible benefits on investment evaluation							×	~								
Track and proactively manage the emergence of unplanned benefits/disbenefits x		×						×								
Proactive management of change x									×					×		
Measure things that really count									×							
Making forecasts come true rather than making good forecasts x																
Engage stakeholders throughout the entire process										×	×					
Continuous evaluation if process is adequate to deliver benefits X											×					
Identify opportunities to realise further benefits x								×						×		
Traslate objectives into measurable benefits that can be tracked x												×	×	×		
Ensure expected benefits of investments are achieved x			×												×	
Review and evaluate results and feedback into the process	-							×		_	_	_				

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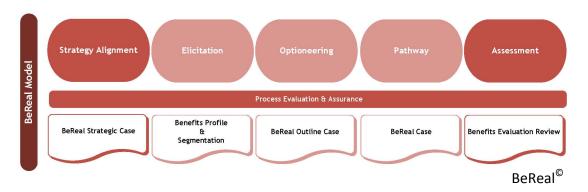
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The BeReal[©] model

The BeReal[©] framework breaks down the benefits management and realisation activities into five main activity groups.

The activity groups are identified to enable alignment within traditional investment and management systems yet distinct, in that the activity needs to be completed to a key deliverable stage to drive the phasing within the overall programme.

Although, each group is represented as individual set of aims, key activities and headline processes that will need to happen to achieve the enabling BeReal[®] deliverable; the concept is that interaction between each group may occur at any time through a flexible "soft gate" approach. This is solely intended to ease its adaptation and implementation when aligned with an organisation's own decision making process.



High Level view

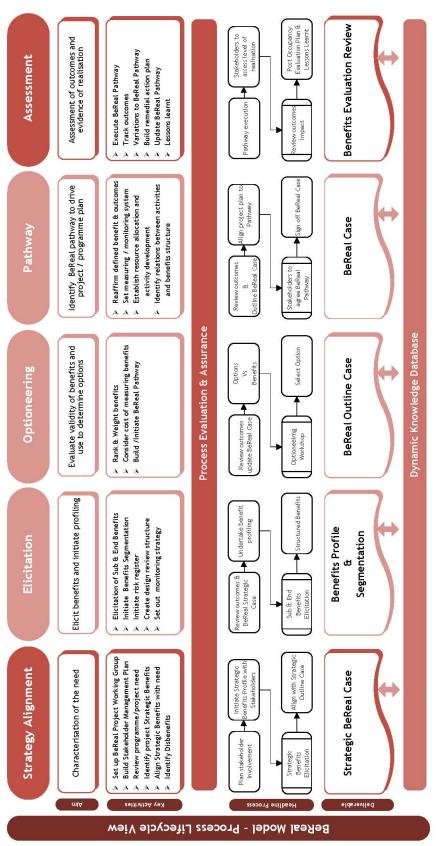
The process lifecycle view is presented next and provides more detail on aim; key activities headline processes and main deliverable for each one of the five BeReal[©] groups.

I believe BeReal[©] is a powerful model that is available to assist all of those engaged in delivering new patient care environments to achieve these objectives and in doing so demonstrate that good value is being obtained from the investment.

Rob Smith

Head of Gateway Reviews and Director of Estates and Facilities Management, Department of Health





BeReal[©]



The *Strategy Alignment* group of activities aims to link benefits realisation with the business investment model. Brings together key stakeholder views to build a collective vision of potential outputs and their impact on the respective programme

A *Project Working Group* is formed to steer the alignment of business need to strategic benefits which translates high level policy into appropriate & realistic

The development of a Stakeholder Management Plan engenders transparency and

ensures a common understanding of the individual stakeholder potential benefits and disbenefits. This will lead to initial *Strategic Benefit Profiling* which constructs

integrated stakeholder vision. It provides the evidence for the Strategic BeReal $^{\odot}$

Case and initiates the benefits ownership.

The workshop needs to be facilitated so that Strategic Benefits will be elicited in an

the basis for a Strategic Benefits Elicitation Workshop.

Strategic Benefits characterise the purpose of the programme / project and provide

an overall direction of success throughout the life cycle.

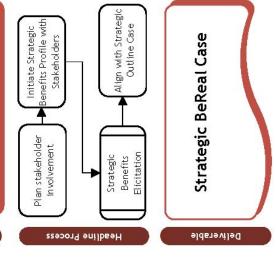
Characterisation of the need

miA

and other business activities.



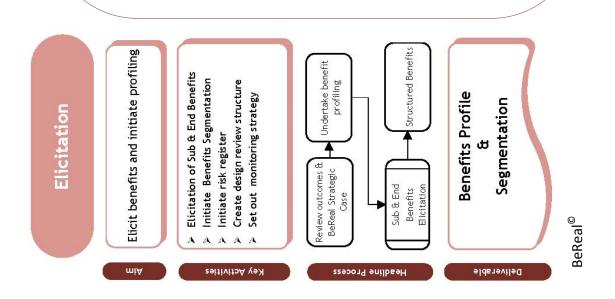
specific aims.



BeReal[©]

The deliverable of a *Strategic BeReal*^{\odot} *Case* concludes this group of activities and drives the investment case. Importantly it sets the criteria for the design brief and the focus for the project team.

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The Elicitation group of activities aims to elicit the next level of benefits (*Sub* and End benefits). It establishes the dependencies between the three levels and forms the core benefit profile.

Sub Benefits characterise specific targets linked to Strategic Benefits that drive design and preliminary evaluate options

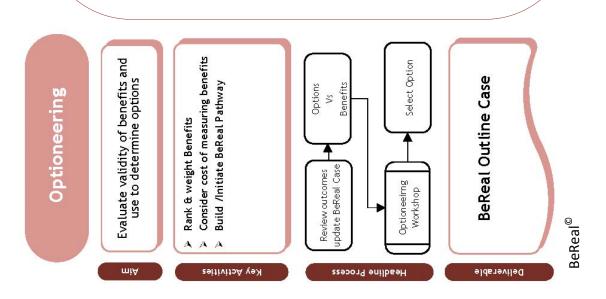
End Benefits are sub benefits further profiled into specific targets that enable performance to be measured against each level. This can be hard, soft, tangible, intangible, quantitative or qualitative (benefits or disbenefits).

Sub and End Benefits elicitation is achieved through workshops (lesson learnt from cases studies) with targeted groups of stakeholders.

Disbenefits elicited through this stage will form part of the risk register that forms the assurance framework.

End and sub benefits profiling should generate the evaluation structure for *Design Option* review.

Benefits Profile & Segmentation delivers the outcome of elicitation as full set of structured profiled benefits segmented by classification, time horizon & interdependencies.



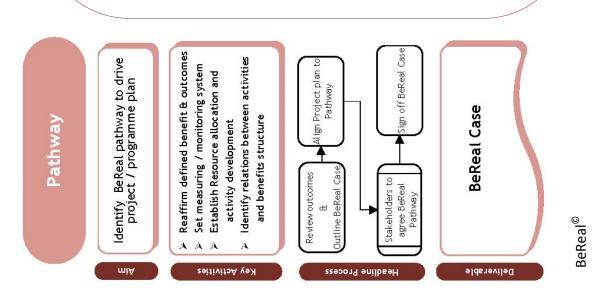
The *Optioneering* group of activities aims to challenge and optimise the benefits structure and is used to determine the recommended design option. This approach will contribute towards a better optimised investment by balancing design options against benefits outcomes and funding available.

By engaging stakeholders to optimise their individual requirements an evaluation criteria structure can be achieved that *Rank and Weight* benefits. This structure is then used to select a recommended option where compromises are understood and agreed within an identified *Benefits Timeline*.

The completed activities initiate the $BeReal^{\oslash}$ Pathway which provides greater confidence and prediction that realisation will materialise.

Our case studies findings have indicated the need for *Elicitation* and *Optioneering* to be separate groups. However it is recognised that in most cases these two may run concurrently

The *BeReal*^{\otimes} *Outline Case* is a benefits driven deliverable that provides a better balanced and informed investment direction.



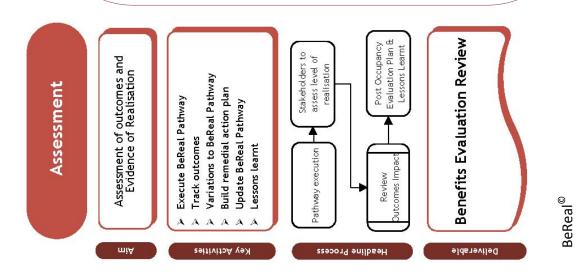
This group of activities identifies the BeReal^{\odot} *Pathway* to realise the *defined benefits and outcomes* within the context of the delivery programme or project plan.

Establish within the programme or project plan resources that are allocated to specific benefits and associated activities, supporting their development.

The BeReal^ $^{\odot}$ resource based view needs to be addressed within these activities and aligned with the wider business and organisation perspective.

Engage stakeholders to agree BeReal $^{\odot}$ Pathway that includes setting of ownership along with the *measuring and monitoring system*.

The *BeReal*^{\odot} *Case* is the platform to drive the programme into the delivery stage which will incorporate a design assurance review. The BeReal^{\odot} case will evolve during the delivery stage to act as the defining manual for the operational phase.



The Assessment group of activities outlines the execution of the BeReal[®] pathway and reconciliation of the realisation of benefits by *tracking outcomes* as they emerge.

The assessment should identify variations and implement remedial action as required.

BeReal measurement and monitoring through stakeholder engagement; by using interviews, questionnaires, post occupancy evaluation and other surveying techniques as demonstrated by the case studies findings.

Constantly update BeReal[®] Case with emerging measuring and monitoring outcomes.

The *Benefits and Evaluation Review* is an ongoing activity where stakeholders are engaged to assess the realisation evidence. Documenting lessons learnt and challenging the evaluation methods to drive innovation and improve performance.

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Process evaluation & assurance structure

Sets out the framework to operate under an auditable, transparent and integrated delivery approach, which acknowledges that operative quality should only be determined by the intended users, staff, patients and visitors.

BeReal[©] processes engender an organisational wide methodology that places importance on four aspects of assurance:-

• Application of soft skills to deliver personal integrity, cultural change and stakeholder's integration

- Transparent change management and risk allocation / awareness
- Decision making around optioneering and interpretation of eclectic feedback

• Provision of accurate and current information flows to stakeholders demonstrating the efficiency and effectiveness of the assurance policies and BeReal[©] operations [which should also include compliance with statutory obligations]

All public bodies have some form of assurance governance in place through audit, systems structures and oversight committees. The challenge will be to integrate the functionality of the BeReal[®] activities as they cross cut major programmes and multiple projects in to these existing assurance systems whilst still enabling flexibility in a soft gate approach across the five distinct activity groups.

It was apparent from the case studies that benefit realisation requires leadership abilities which transcend the typical change programme / project management competences. Awareness of the business vision, governance, integrated care services, organisational capacity, community involvement etc will be fundamental in benefit identification, elicitation, optioneering and delivering the pathway and assessment activities.

In context, Project Evaluation and Assurance will be further developed as the HaCIRIC work progresses to the next stages and individual case studies move out of the single activity groups approach

Dynamic knowledge database

A mechanism for recording, storing and retrieving the three levels of benefit profiling, segmentation and measured outcomes which can be used to:-

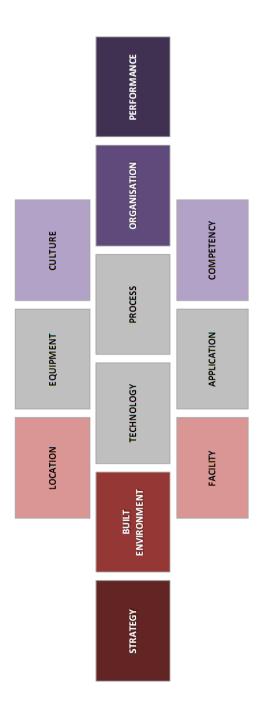
- build lessons learnt;
- develop comparator data; and

• Which will form a significant historical reference for participants in strategic investment planning or active or future programmes [projects].

Potential for developing bespoke IT solutions needs to be explored

BeReal[®] resource based view

important aspects to acquire and comprehensively manage resources in such a way that a superior and sustainable performance is Understanding the built environment and the organisation as a bundle of resources (resource based view), is one of the most achieved, both under an efficacy and efficiency perspective. Understanding that performance (efficacy and efficiency) is a prime objective of a strategy (e.g., investment strategy in health and care); the achievement of a superior and sustainable performance should emerge both from a proper identification and allocation of resources to elicited (and most rewarding) benefits. The resource based view illustrates the BeReal[®] recommended high-level segmentation of the bundle of recourses, identifying as first level resources the built environment, technology, processes and organisation, and a second level highlighted resources the location, facility, equipment, application, competency and culture.





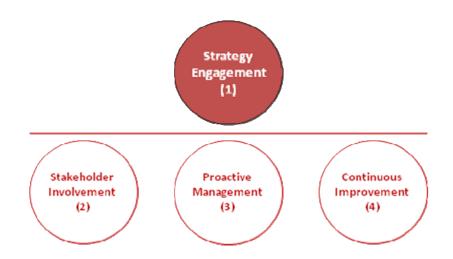
		PERFORMANCE	Overall objective of the strategy relates with obtaining performance, both under a efficiacy and efficacy approach. Major quantified or unquantifiable aspects considered are prefix, discherefix and costs follow-up is assured under a <i>as-is</i> (real/future). (targeted) and <i>emerged</i> (real/future).		
	Endoses the specific collection of values, customs, raditions, meanings, and norms tustoms, raditions, meanings, and norms of an organization, and that control the way of an organization, and that control the way they interact with each other interact with they interact the organization.	ORGANISATION	Organization relates (in-)directly with all cool arrangements backing to the delivery of health and care products and service. Organization main functions might be rimanity segmented between health and care, operations management, and back office support services.		An activity for group of activities) that is centar, not perpheral, to an organisation's strategy and that is performed distinctively and consistently well, contributing decisively to deliver valuable benefits. (examples clated with heathcare operations might be: X-ray, accident & emergency).
CULTURE	Encloses the specific collection of va customs, radiations, meanings, and na customs, radiations, meanings, and na radiations and that control the they interact with each other internally influence the way they internally influence the way they internally stakeholders of outside the organization.		Relates with the interconnected sequence of procedures factivites) Leading to a clear objective, deliverable and/or output. For achieving superior performance, clear teadership of processes and responsibility of actions should be defined, along with proper IT enabling support.	COMPETENCY	An activity for group of a central, not peripheral, to a strategy and that is perform and consistently well, contril to deliver valuable bene related with healthcare oper X-ray, accident & emergency)
	Covers all physical equipment assets, from those elivered with the building, to those related with health and care operations management specificities, and to other related with back-office functions. Assets should be maintained, reconfigured and rationalized infater stages.	PROCESS	Relates with the interconnected sequence procedures (activities)) leading to a clean objective, deliverable and/or output. For a cheving superior performance, clear readers provide by processes and responsibility actions should be drifted, along with prop actions should be drifted.		Overs relecom components (as computer recovors) and othave programs (and data bases). All organization wide software (data bases and relecom), department-specific, function-specific, being directly related or four thread and care operations should be considered.
EQUIPMENT	Covers all physical equip those delivered with the related with health and management specificite related with back-office should be maintained, rationalized inlater stages		Includes all technological architecture components, fouciding system applications, hardware, and reacommunications/network aspects, related with medical (health and care) treatments, related with operations management, and/or supporting the back- office functions development.	APPLICATION	Covers telecom com networks) and softw bases). All organizati bases and telecom function-specific, be not with health and be considered.
	with the environment place and considers functional spacets teractions with the overall health in envoids. Locinon is highly by health and care demand, and by existing future health and oris characteristics and design.	TECHNOLOGY	Includes all technologics components, including softw hardware, and telecommuni aspects, related with medi care) treatments, related management, and/or supc		g. structures, facades, layouts) decorative connents related ef to the development of health activities. Leading to facilities for bath and care, the following usually considered, development, , and facilities management.
LOCATION	Relates with the environment place textrans), and considers functional aspects as the interactions with the overall health and care network. <i>Location</i> is highly influenced by health and care demand, context, and by esisting/future health and care network characteristics and design.		de surroundings that cor health and care <i>cotion</i> level (context sertuctures, facades, ponents).	FACILITY	Buildings (e.g., structures, facades, layouts) and installed decorative components related to or required to the development of health and care activities. Leading to facilities availability for health and care, the following phases are usually considered velopment, construction, and facilities management.
			retrieventuries refers to the mar-made surroundings that provide the settings for health and care activities, both at the <i>location</i> level (context relevel, health and care network) and at the <i>focility</i> level (building, structures, facades, layous, decorative components).		
		STRATEGY	Strategy definition emerges from the detrification of need (e.g., more capabaty), characterising major lines of merentions (programs, projects, initiatives) that target superior performance, including quantified or unquantifiable aspects as benefits, dis- benefits and costs.		

BeReal[©]

BeReal[©] benefits strategy operationalisation

The BeReal[©] strategic operationalisation relates with the process through which organizations analyse and learn from their internal and external environments, establish strategic direction, create strategies that are intended to help achieve established goals, and execute those strategies, all in an effort to satisfy key organisational constituencies (stakeholders). Indeed, from case studies, the need for collective responsibility for decision making and transparent interaction between commissioner, project team and beneficiaries was deemed essential for successful outcomes.

Leading to a proper identification of activities and a proper allocation of *resources* targeting elicited (and most rewarding) *benefits*, this strategy engagement tool pretends to built relationships between resources that range from the *built environment* to a more *organisation* perspective.



This strategy engagement (1) tool identifies three additional key elements to promote strategy engagement, through robust methodology ensuring effective governance and assurance: stakeholder involvement (2), proactive management (3) and continuous improvement (4).

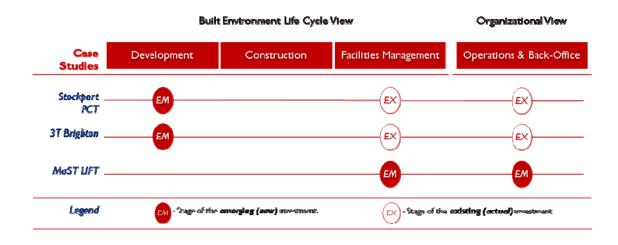
Strategy Engagement (1)	Highlighting Aspects	Definition of clear roles and responsibilities. Necessity of robust methods of governance. Establish interdependencies between benefits management and other management disciplines. Embedment or integration of benefits realisation and business case to act as one powerful document that will be flexible to changes. Translating high level policy into appropriate and realistic local strategic aims, taking into account of all stakeholder interests and how they impact on the policy deployment process Integrate into business planning clear links between benefits realisation plan and programme outcomes. Incorporation of programme specific benefits to the wider business view by aligning organisation's resources.
Stakeholder Involvement (2)	Highlighting Aspects	Identify key stakeholders and elicit stakeholder voice. Promotion of process transparency, clarity and productive partnership. Establish Communication Strategy. Promote collaboration. Elicit stakeholder voice and promote benefit awareness across diverse groupings Establish terms of teamwork and understanding of multi- stakeholder requirements. Identify explicit synergies between stakeholders and sectors to manage conflict and break barriers.
Proactive Management (3)	Highlighting Aspects	Classification of benefits in terms of value, organisational impact (internal and external), planned and unplanned. Provide an evidence base for future decision making & predictability.
Continuous Improvement (4)	Highlighting Aspects	Monitoring and reviewing of benefits evolution to establish baseline and maintain a CI momentum either within an existing programme/ project or when planning for new ones. Value generation and elimination of wasteful activities (Lean approach) in programme development, implementation and delivery. Enable Knowledge sharing & continuity.



CASE STUDIES

Research design

The development of the BeReal[©] model introduced earlier in the report is being informed by an extensive literature review on existing approaches and methods and subsequently tested through case studies at different stages of the lifecycle of a healthcare programme development. The majority of healthcare programmes have a life span of 20-30 years, which presents a constraint in choosing a single project to act as a case study in developing, implementing and validating the BeReal[©] model. Therefore, multiple case studies were conducted, using projects at different phases of their lifecycle.



As summarised in the figure above, coverage of the identified generic phases of a healthcare programme is comprehensive in terms of the built environment lifecycle. Policy setting, programme development, and business case approval are considered within the development phase. After construction, post project/occupancy evaluation and operational programme phases are considered within the facilities dimension and the operations & back-office view (organisational view).

Manchester Salford & Trafford (MaST) Local Improvement Finance Trust (LIFT)

Scope

MaST is the largest of the LIFT partnerships, and was established in March 2001. The aim of the study was to evaluate the first wave LIFT schemes at a post occupancy phase in terms of benefits realised so far (planned versus emerged) and to validate suitable methods for Post Occupancy Evaluation (POE) benefits assessment. The case study focused on the benefits Elicitation and Assessment group of activities of the BeReal[©] model.



NHS MaST LIFT Partnership

Methods and Outputs

• Creation of a *Project Working Group* to ensure representation of key stakeholders, including, the MaST LIFT Partnership Programme Director, MaST LIFT Chief executive, Manchester Primary Care Trust (PCT) Finance Director, the three Health Centre Managers, a Department of Health Gateway reviewer, a Manchester City Council Health Joint Unit program manager, a Primary Plus Facilities Manager, a Community Health Action Partnership Director, and the research team.

• *Elicitation* of benefits related to 1st wave schemes of MaST LIFT. This was a retrospective identification of benefits as the three schemes were already occupied and operational. In order to compile a catalogue of benefits to be evaluated, an initial study

by the project team looked into the Strategic Service Development Plan (SSDP), the Local Development Plan (LDP), and the approved business case documents of the schemes. The result of the study delivered a first set of *Strategic benefits* that the local healthcare authorities aimed to deliver through LIFT in the area of Manchester, Salford and Trafford (MaST). This was then further explored as part of a four *Benefits Elicitation Workshops* involving the Strategic Partnering Board (SPB) of MaST LIFT and the Steering group. Based on that, the benefits elicitation workshop delivered a (second/reviewed) full set of benefits, organised into *Strategic and Sub benefit*. A set of 5 Strategic and 36 Sub benefits were elicited and *profiled*.



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• Evaluation of the perceived impact according to patients, staff and centre users of the 3 evaluated schemes in relation to the 5 MaST LIFT Strategic benefits. The research team used *questionnaires* for staff, patients and centre users, and interviews to produce primary quantitative and qualitative data.

"Having been involved in the BeReal[©] project for a number of years, this work has been instrumental in allowing public sector partners to more critically appraise the likely value of a particular project.

Traditionally, public sector partners often allowed themselves to assume the likely net worth of various benefits to users at the business case development stage for any project. The front end work involved within this research project has rightly forced us to challenge these assumptions and has enabled us to more genuinely appraise if the benefits that we propose to deliver are those that are actually valued highly by the population and users that we are to serve. Conversely, the BeReal[©] project work has illustrated inter-linkages between benefits and dis-benefits generated that previously we had little real appreciation for.

Going forward, the importance that the BeReal[®] work has attached to honestly appraising benefits that are important to users provides us with a powerful platform on which to develop future projects. On future schemes the BeReal[®] benefits templates will enable us to fully understand the elements that we need to target at an early stage in the development of any project".

Clare Postlethwaite Partnership Director NHS MaST LIFT Partnership

Stockport NHS PCT

Scope

This case study was the first in a series of activities of a collaborative project between Stockport PCT and (HaCIRIC) for the further development and implementation of the BeReal[©] model.

The aim was to validate the first two groups of activities of the model; *Strategy alignment* and *Elicitation*.

Stockport NHS Primary Care Trust

Methods and Outputs

Two *benefits elicitation workshops* took place at Stockport PCT with participation of key stakeholders as part of the development of St Thomas Community Hospital full business case. The two workshops engaged key stakeholders of St Thomas community hospital development into identifying the benefits that this project will bring. The benefits realisation scenario that will be part of the Full Business Case for this project.

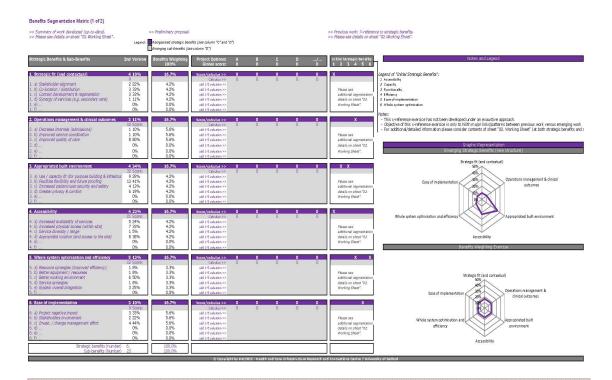


The process was beneficial in bringing key stakeholders of the St Thomas development programme together and provided the platform for collaboration, enhanced communication and better involvement. The two workshops have resulted in a set of outcomes that will be essential when structuring St Thomas Community Hospital full business case.

Prior to the two workshops Stockport PCT Board and the Professional Executive Committee have agreed that St Thomas Community hospital will need to satisfy the following 6 strategic benefit: Accessibility, Capacity, Functionality, Efficiency, Whole System Optimisation and Ease of Implementation.

These 6 Strategic benefit criteria formed the basis for discussion amongst 28 stakeholders that participated in the two Benefit identification workshops. The stakeholders present included 5 GPs, 4 GP Practice managers, 11Stockport PCT/NHS Directors/Leads, a Project Support Officer, 3 members of the Stockport managed care group, 2 members of PALs, an Architect, and a Tribal Consulting representative.

The workshops were facilitated by HaCIRIC members and resulted in the emergence of 6 *strategic benefits* and 23 *Sub-benefits*. Participants have also identified a list of 36 beneficiaries, 68 actors and 73 enablers that will form the input to further activities when interdependencies between those elements will be established in order to formulate the *benefits pathway*. A list of 18 dis-benefits has also been identified that will be used to further inform the project's *risk register*.



"It was crucial that NHS Stockport used a benefits realisation/change management methodology that could successfully be mapped, understood and embedded in the organisation, not just in the early stages but throughout the life and post implementation of the new services.

NHS Stockport therefore chose the BeReal model developed by HaCIRIC, this methodology gave a whole system view and following a series of stakeholder participative workshops we have been able, with the help of HaCIRIC to fully document the service benefits that will accrue from the project and the changes needed to come about during the life and beyond of the project for key services integration.

The BeReal[©] model and methodology combine service needs, managerial and corporate expectations with academic rigor. The model contains evidence grounded theory assumptions with the ability to test new and innovative health care delivery models in a safe and collaborative environment.

HaCIRIC are able to couple service needs models with the new build requirement to deliver innovative care"

Ray Goodier Associate Director of Finance Strategic Capital Developments NHS Stockport

Brighton and Sussex University Hospitals 3Ts Development

Scope

Tertiary, Trauma and Teaching (3Ts) is a hospital development programme by Brighton and Sussex University Hospitals (BSUH) whose vision it is to provide clinical services, buildings and infrastructure that will be used by the local populations of Mid Sussex, Brighton and Hove for the next 30 to 40 years (Brighton and Sussex University Hospitals, 2009). BSUH 3Ts was in May 2009 at the business case approval stage.

The principal aim of this case study was to *elicit, classify and characterise* benefits for the 3Ts hospital development as well as validating the BeReal[©] methods of doing so. Furthermore, the case study aimed to develop and test methods for benefits *ranking & weighting* that were subsequently used for selecting between design options for the hospital development.

These activities are in alignment with BeReal[©] model *Elicitation and Optioneering* group of activities. Brighton and Sussex NHS University Hospitals

Methods and Outputs

Strategic benefits elicitation; In a workshop prior to the approval of the Strategic Outline Case (SOC) six strategic benefits had been elicited: (1) strategic fit, (2) clinical outcomes, (3) modern healthcare facilities, (4) improved access, (5) teaching, training and research and (6) effective use of resources. Nevertheless, this group enlarged to 8 strategic benefits, based on data that emerged from the *Benefits Elicitation Workshop* with stakeholders

Sub and End Benefits Elicitation; Further sub and end benefits were elicited through ten benefits identification workshops with groups of 20/25 BSUH 3T stakeholders and researchers (facilitators). These workshops were used to gain the views of the different groups on BSUH 3Ts. During the workshops an overall of 682 benefits were elicited. The benefits were then summarised and compiled into two main categories consisting of 8 strategic benefits and 37 sub benefits

Optioneering Workshop; The aim of this workshop was to agree on the preferred design option. It was facilitated by the BSUH 3Ts Project Director and all key stakeholders group representatives participated. The 5 design options were presented in detail to the group by the architect, the attendees were asked to assign a score of 1 to 5 against the different benefits for each design option. Once the scoring was completed the group undertook open discussions to rank the 8 strategic benefits. This was done by getting to a general consensus of the order of importance of the benefits and assigning a percentage to each strategic and sub benefit, so that they totalled one hundred percent Once these weightings were assigned to the strategic benefits. It was then possible to score (between 1 and 5) the different options in relation to the ranking of the benefits and identify the final design proposal.

The 3Ts hospital development is now (May 2009) at a stage where the identified benefits can be incorporated in the full business case. These benefits details and the business case contents will further assist in identifying monitoring methods that need to be in place to support review and evaluation of benefits during the BeReal[©]'s *Pathway and Assessment* group stages.

"Our association with HaCIRIC has enabled us to identify a clear methodology and process for identifying the benefits we hope to realise. We have already identified several hundred intended benefits from our staff, commissioners and patient groups and we are currently working with HaCIRIC to see how we can clearly set these out and identify measures to quantify as many as possible.

The work we are doing now, and will continue to do with HaCIRIC will provide us with a clear opportunity to ensure that we continuously review our benefits planning and ensure we drive the intended benefits through into full realisation – in difficult economic times for the public sector we have a duty, more than ever, to show clearly what we are achieving for the public money we invest"

Professor Duane Passman

Director of 3Ts, Estates and Facilities Briahton & Sussex Universitv Hospitals NHS Trust

Lessons learnt

This report introduced an emergent benefits realisation model (BeReal[©]) and highlighted findings from three case studies, targeting the integrated planning and evaluation of healthcare infrastructures and services in the UK. The research presented provides evidence of the importance of benefits realisation along different phases of capital investment programmes and the findings from the case studies have contributed to the development and validation of the major different dimensions within the BeReal[©] model, as discussed along the following paragraphs.

Benefits elicitation meetings with a diversity of stakeholders are recommended and understood as a critical surveying activity, since the participation of a variety of stakeholders enables the incorporation of different views and perspectives. Participation of a diversity of *stakeholders* (including the overall programme management team) along the programme lifecycle and throughout the organisation (e.g. business functions) is also regarded as beneficial under a management of expectation perspective and contributes to a better comprehensiveness (scope) of benefits.

Active and systematic organisation of the elicited benefits, under a *three-level benefit* organisation structure, is regarded as a necessary and valuable activity. This activity consists of highlighting (dis)similarities, consolidating (e.g. two similar elicited benefits in one) and *segmenting* elicited data/benefits under the systematised organisation approach that is able to assure support throughout the investment programme (e.g. selection of design options, controlling/monitoring).

Since benefits are elicited a proper traceability management of benefits is recommended, highlighting stakeholders involved, identified overlapping and dependencies between the benefits, etc. Major data collection techniques tested and recommended to elicited benefits are *workshops* with stakeholders, *surveying questionnaires* and historical data gathering through consultation of existing documentation.

Collective decision-making should be developed under a sequential mode *optioneering* (and weighting) approach. Selection of options based on weighting strategic and sub benefits highly enables decision-making among a higher number of different design options. The identification of the best option (ranking) is based on a ranking developed only among the short-listed options, and also focusing on the strategic and sub benefits levels.

Conceptual design of a monitoring/controlling structure covering the overall built environment lifecycle and organizational views, should guarantee traceability of elicitation/changes along the programme lifecycle, highlighting dependency and overlapping of benefits.

Planning should consider cross analysing the relation between available resources and elicited benefits, so the selection (and allocation) of the mix of resources enables benefits realisation maximisation.

"This work with HaCIRIC has been highly valuable as in the face of the global economic downturn the use of public resources is under increasing scrutiny. It follows that the previous decade of significant growth will be succeeded by a long period of standstill or funding reductions for health and social care expenditure. It is therefore essential that we can fully understand and evidence the benefits of improved health care infrastructure to a range of stakeholders"

Ged Devereux

Senior Strategy Manager Health and Regeneration Manchester Joint Health Unit

Future work

The past three years have been very important in developing the understanding around benefits realisation and generating solutions to address the market need for an effective programme and project assessment that brings back the real purpose of an investment 'benefits'. The project now enters the next stage of implementation where subsequent activities will take place to further enhance and validate the BeReal[®] process. The immediate planned steps include:

- Further developments of the IT web based tool that will potential enable communication and promote a collaborative working environment. The IT tool aims to enable share of knowledge around benefits re-utilisation and benchmarking (e.g. KPIs related to project benefits).
- Embed the BeReal[©] process with a more detailed design, focusing on the elements that have been presented and need to be further explored (e.g. Resource based view, BeReal[©] Case, BeReal[©] Pathway).
- Further exploration of how (dis-)benefits are understood and should be linked and compared against costs.
- Further explore the connection between benefits and evidence based design.

The University of Salford HaCIRIC / BeReal[©] team



Mike Kagioglou is a professor of process management and the head of school of the Built Environment at the University of Salford. He is the director of the Salford Centre for Research and Innovation (SCRI). His academic interests include Healthcare infrastructures, process management and operations, knowledge management and benefits realisation. Mike is the Principal Investigator for the BeReal[©] research project.



Stelios Sapountzis is the BeReal[©] research project manager. He is a research fellow in HaCIRIC at University of Salford. He is a qualified manufacturing engineer with postgraduate studies in Advanced Manufacturing Systems. He has extensive industrial experience as an Operations/Production manager. His research interests include Benefits Realisation, Process and Change management and Lean service delivery.



Kathryn Yates is a researcher at HaCIRIC at the University of Salford. She has a BSc (Hons) in Sociology and her MSc dissertation focused on team development and maintenance. Kathryn's current research is in performance and knowledge management and in particular benefits realisation & management within healthcare infrastructures development and major capital investment programmes. Kathryn has been involved with the BeReal[©] development for the past three years.



José Barreiro Lima holds a Civil Engineering degree, an MBA from the EGP-University of Porto Business School, and an MSc Management from University of Oporto. In 2008, he obtained a PhD from Salford University. Over the last years José delivered management consulting services in Portugal and abroad. Since 2008, José is a Consultant Fellow for the HaCIRIC BeReal[©] initiative. In Portugal, he is an Invited Assistant Professor at the University of Minho and is the Regent's Professor (Invited) of Information Technology at the ISG -Management School.



Ricardo Codinhoto is a qualified architect with industrial, teaching and research experience. Ricardo holds a research fellow position within HaCIRIC (Health and Care Infrastructure Research and Innovation Centre) and SCRI (Salford Centre for Research & Innovation) at The University of Salford. He is active in a number of research initiatives related to design theory, management and practice in construction.

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Patricia Tillmann has a background in architecture and construction management. She is a PhD candidate at the Federal University of Rio Grande do Sul, in Brazil. Patricia is currently undertaking research under HaCIRIC as a visiting fellow at the university of Salford. Her research is related to value generation and benefits realisation in governmental programmes.



Keith Hamblett is an industrialist with a managerial background in change management shaped around strategic partnerships and procurement. He is a Non Executive Director for a local Primary Care Trust, Member of the advisory board for Places Matter! and is a Fellow of the Royal Institution of Chartered Surveyors. Keith has worked previously on the Process Protocol and Spice FM projects and he is an advisor to the BeReal[©] project team since April 2009.



..... Quanbin Sun is a PhD student at the University of Salford. He is a research member of SCRI (Salford Centre for Research & Innovation) and Think Lab. He has a strong computer science background and he is doing research on Human Behavioural Modelling and Crowd Simulation. He is also a technical member of the HaCIRIC and he is currently developing a web-based research toolkit on behalf of the BeReal[©] research group.

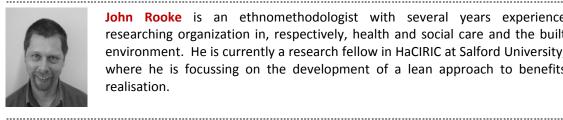


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Eric Lou research interests encompass construction ICT, organisational readiness, business strategies and project planning. He is now actively researching into the niche areas of e-readiness of built environment organisations and benefits realisation in healthcare. He is currently employed as a Research Manager for the Built and Human Environment (BuHu), University of Salford, UK.



Patricia Tzortzopoulos is an Academic Fellow at the School of the Build Environment, University of Salford, UK. She comes from an architectural background and has been developing research for over ten years focusing to different aspects of design and the built environment. Her research interests cover design management; new product development; process management; and operations management.



John Rooke is an ethnomethodologist with several years experience researching organization in, respectively, health and social care and the built environment. He is currently a research fellow in HaCIRIC at Salford University, where he is focussing on the development of a lean approach to benefits realisation.



Lauri Koskela is Professor in the School of the Built Environment at the University of Salford. Since 1991, he has been researching and developing lean construction. He is a founding member of the International Group for Lean Construction (IGLC). In terms of healthcare infrastructures, Lauri is especially interested in the synergetic use of lean principles and Building Information Modelling techniques in hospital projects.



Ghassan Aouad is the Pro-Vice-Chancellor for Research and Innovation at the University of Salford. Before becoming PVC in July 2008, Ghassan was Dean of the Faculty of Business, Law and The Built Environment at the University and prior to this he held the position of Director of the Research Institute of the Built & Human Environment which achieved the RAE 6* status in 2001. Between 2003 and 2006 he was Head of School of Construction & Property Management at the University. Ghassan has spent the last 20 years teaching and researching subjects related to the areas of Information Modelling and Visualisation, nD simulation, and process mapping.

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BeReal[©] publications

Journal & Conference Papers

Sapountzis, S., Yates, K. and Kagioglou, M., Aouad, G., (2009) "Realising Benefits for Primary Healthcare Infrastructures", Facilities, Vol.27 No.3/4, pp.74-78, March 2009.

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Harris, K. A, Sapountzis, S., and Kagioglou, M. (2008) "The methodological development of a Benefits Realisation Management Process (BRMP) in the case of Manchester, Salford and Trafford (MaST) Local Improvement Finance Trust (LIFT)", 8th BuHu International Postgraduate Research Conference, June 26 -27 Prague, Czech Republic.

Research reports

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Tillmann, P., Sapountzis, S. Yates, Y., and Kagioglou, M. (2009), "Analysis and Synthesis of Benefits Realisation Literature Review, A BeReal[©] Comparison", HaCIRIC, The University of Salford, August, Salford, UK.

Six Advisory Group Workshop reports monitoring progress and lessons learnt. December 2006, May 2007, September 2007, February 2008, September 2008, March 2009.

Three case study reports (Douglas Green 'Healthy Energise Centre', March 2009; St Thomas Community Hospital, April 2009; Romiley 'One stop Health Shop' May 2009).

Presentations / Keynotes /invited lectures.

APM (Association for Project Management) North West Branch in association with IChemE PMSG Seminar – "Budget - What Budget?" Wigan, UK. Seminar keynote: 12 Dec 2008.

"The methodological development of a Benefits Realisation Management Process (BRMP) in the case of Manchester, Salford and Trafford (MaST) Local Improvement Finance Trust (LIFT)", 8th BuHu International Postgraduate Research Conference, June 26-27 Prague, Czech Republic.

"The development of a Benefits Realisation Management Process to drive successful programmes and projects", Conference Paper Presentation in the Joint Fourth Scientific Conference on Project Management (PM-04) & the First IPMA /MedNet Conference - Project Management Advances, Training & Certification in the Mediterranean», Chios, Greece 30/05/2008.

"Performance Measurement and Management within Healthcare Projects", Conference Paper Presentation in Joint Fourth Scientific Conference on Project Management (PM-04) & the First IPMA /MedNet Conference - Project Management Advances, Training & Certification in the Mediterranean», Chios, Greece 29/05/2008.

BeReal[©] and LIP @ LIFT & Community Hospitals Knowledge Transfer Programme Launch, Hilton Hotel, Park Lane, London 21/05/2008.

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BeReal Enquires

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