

Driving Balanced Portfolios through Enterprise Architecture

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Topics addressed:

Enterprise business architecture & business improvement

Portfolio management as an architecture problem

Benefits of an architecture approach to portfolio management

Case studies: Defence and Natural Resources

Key points and concluding remarks

Enterprise business architecture & business improvement



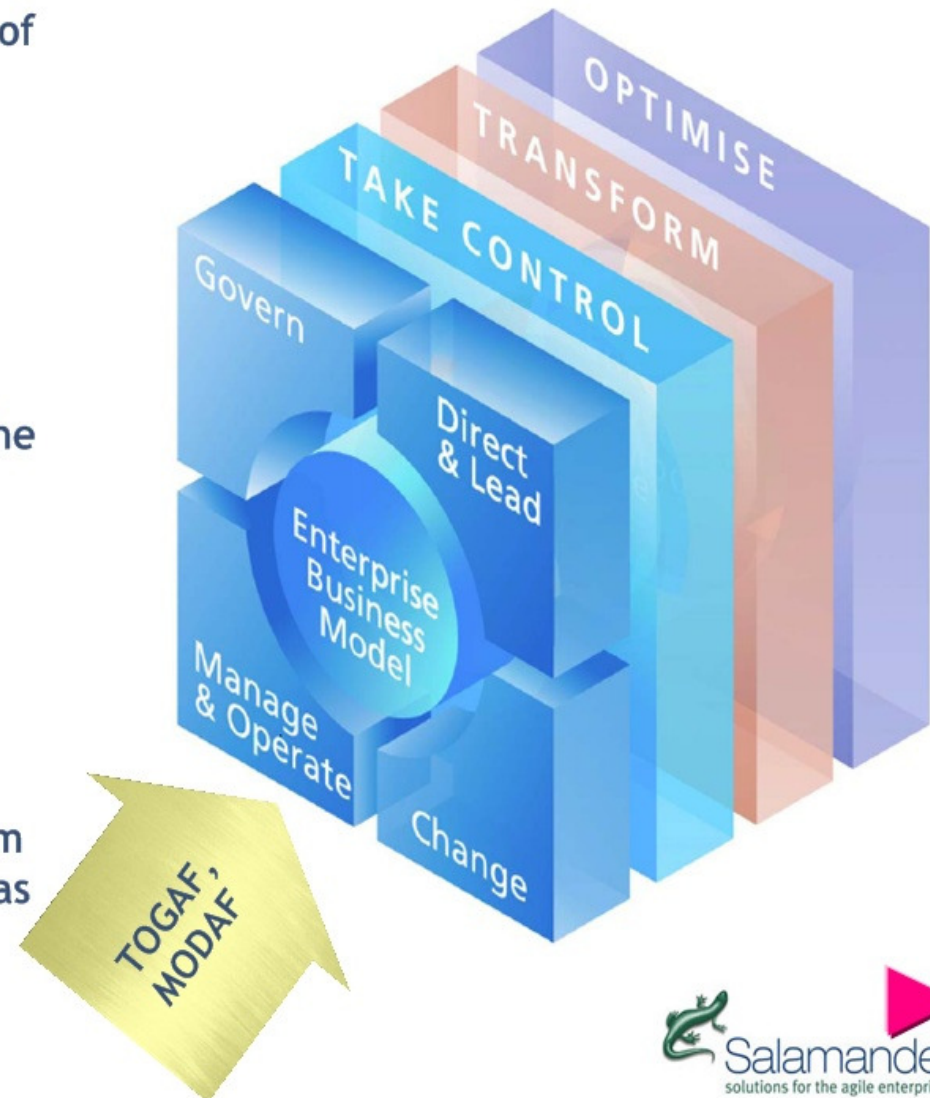
An enterprise business model / architecture:

- models and synchronises key capabilities of the enterprise.
- provides a single view of the truth that joins-up execution, change and performance optimisation.

MODAF and TOGAF each provide many of the constructs needed to create and exploit business architecture.

Extensions have been included within the MODAF Blueprint for Mood (the M4), especially relating to performance management.

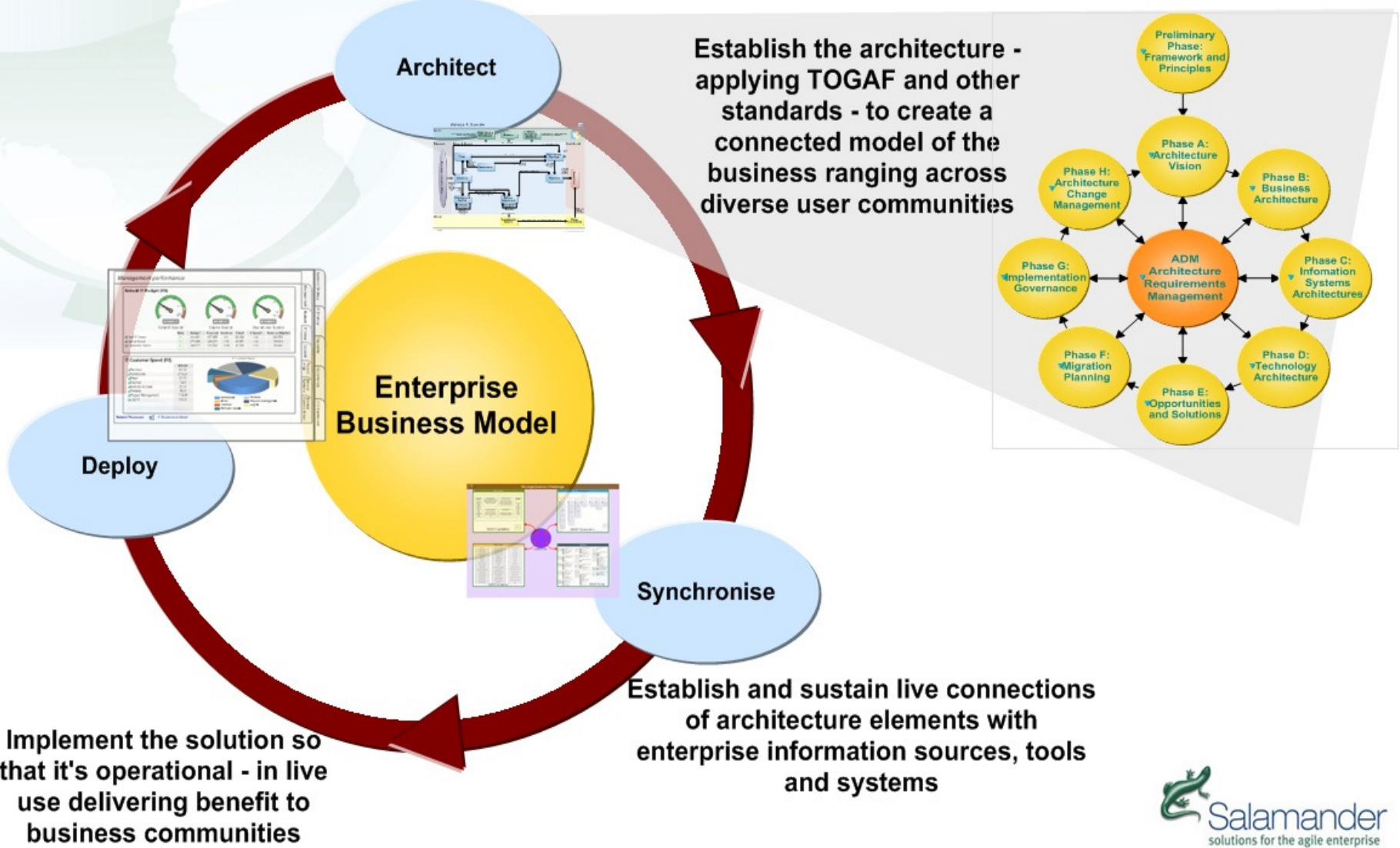
A key concept is the value that derives from operationalising the business architecture as a live system ...



Operationalising architecture in the business



A business architecture is a "live system" - used by business communities to understand, analyse, plan, take and communicate decisions relating to business structure, change and performance.



Portfolio management as an architecture problem



Businesses in all sectors manage portfolios of assets / services / capabilities / project & programmes / systems / ...

Each element within a portfolio delivers identifiable business value, which may be real and current or potential.

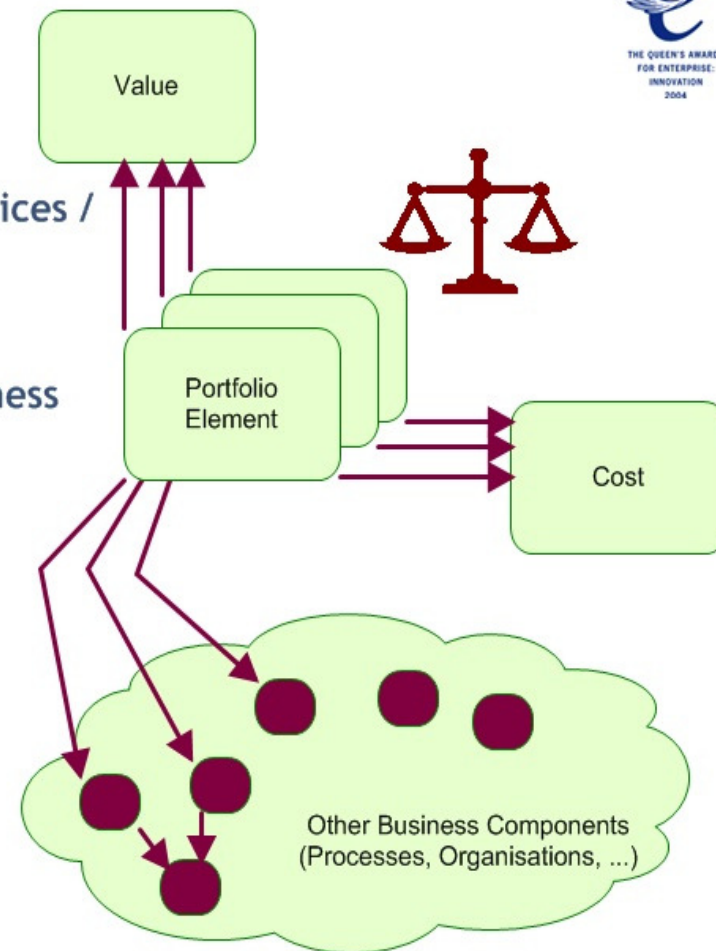
And an associated cost profile.

And a complex set of associations, dependencies and implications on processes, organisations, technologies, change initiatives, risk profile, ...

The challenge is to balance the portfolio to optimise the actual & projected business value while meeting cost and risk constraints and sustaining business coherence.

An architecture approach models these relationships so as to inform decision making against the backdrop of the whole business.

>> This places architecture cleanly in the business value chain.

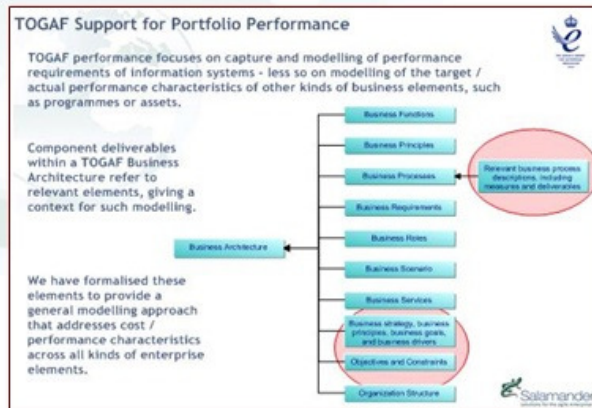


Standards Support for Portfolio Performance within Architecture

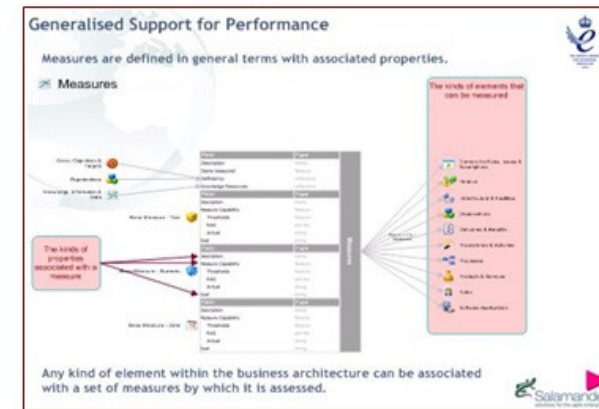


Balancing portfolio effectiveness means applying performance properties to elements of the business architecture.

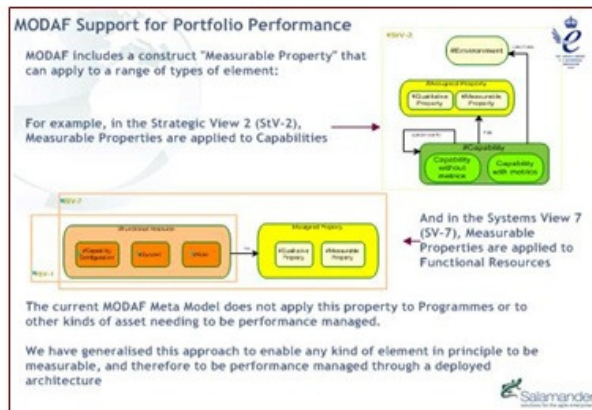
Contribution of EA-related standards initiatives:



TOGAF Support for Portfolio Performance



Generalised Support for Performance



MODAF Support for Portfolio Performance

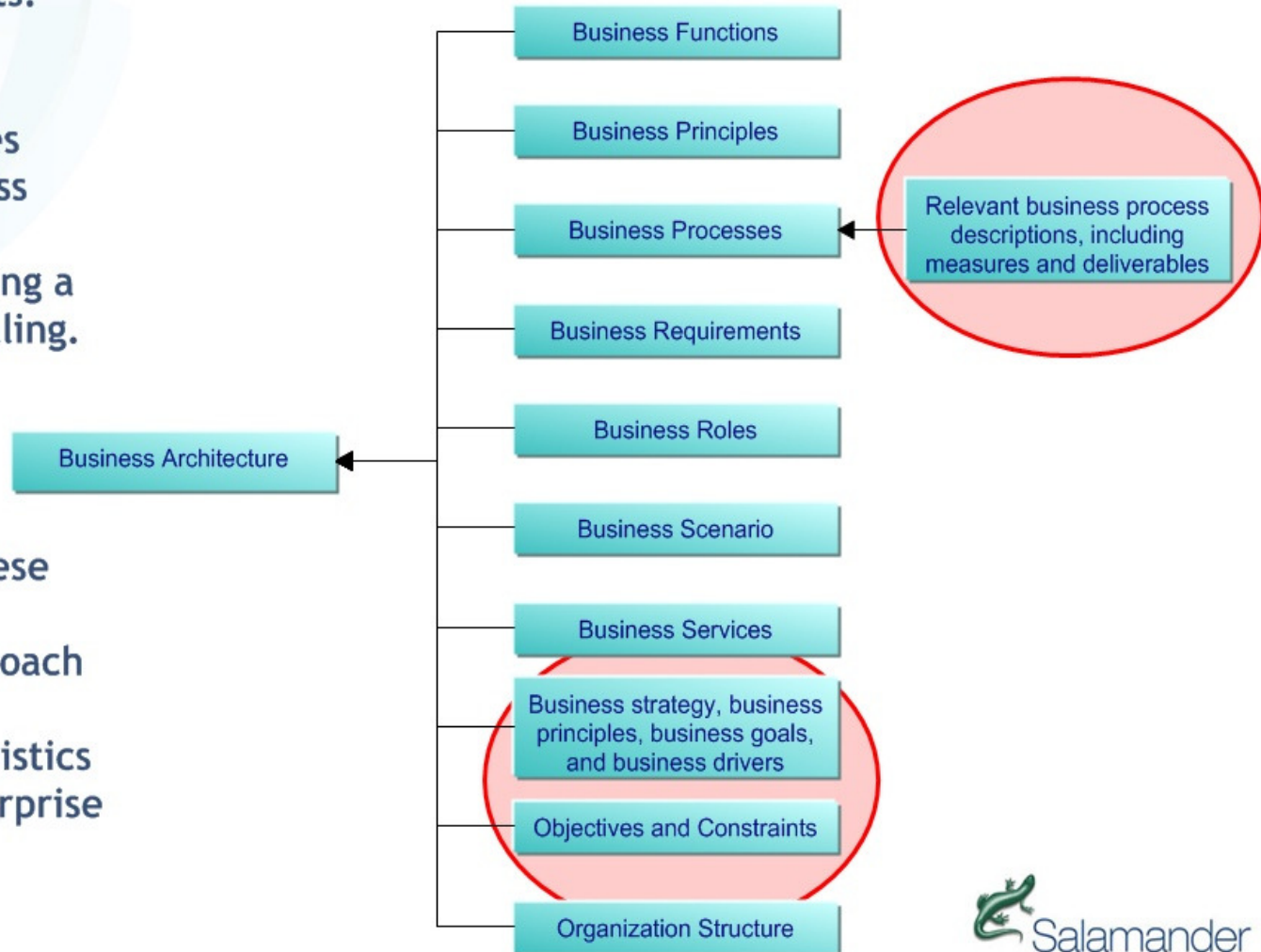
TOGAF Support for Portfolio Performance



TOGAF performance focuses on capture and modelling of performance requirements of information systems - less so on modelling of the target / actual performance characteristics of other kinds of business elements, such as programmes or assets.

Component deliverables within a TOGAF Business Architecture refer to relevant elements, giving a context for such modelling.

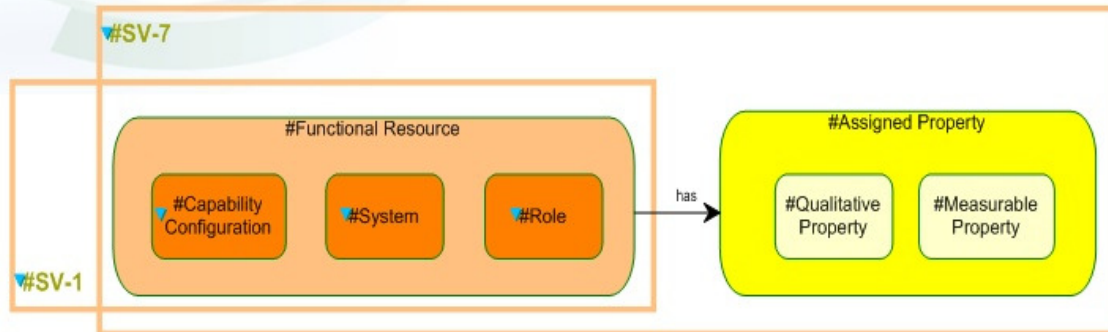
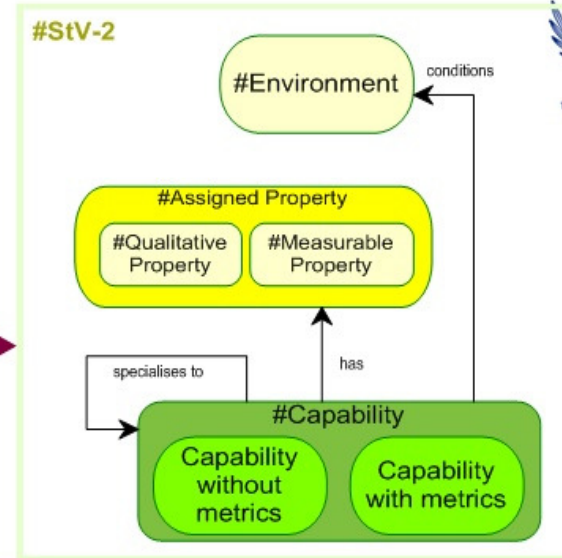
We have formalised these elements to provide a general modelling approach that addresses cost / performance characteristics across all kinds of enterprise elements.



MODAF Support for Portfolio Performance

MODAF includes a construct "Measurable Property" that can apply to a range of types of element:

For example, in the Strategic View 2 (StV-2), Measurable Properties are applied to Capabilities



And in the Systems View 7 (SV-7), Measurable Properties are applied to Functional Resources

The current MODAF Meta Model does not apply this property to Programmes or to other kinds of asset needing to be performance managed.

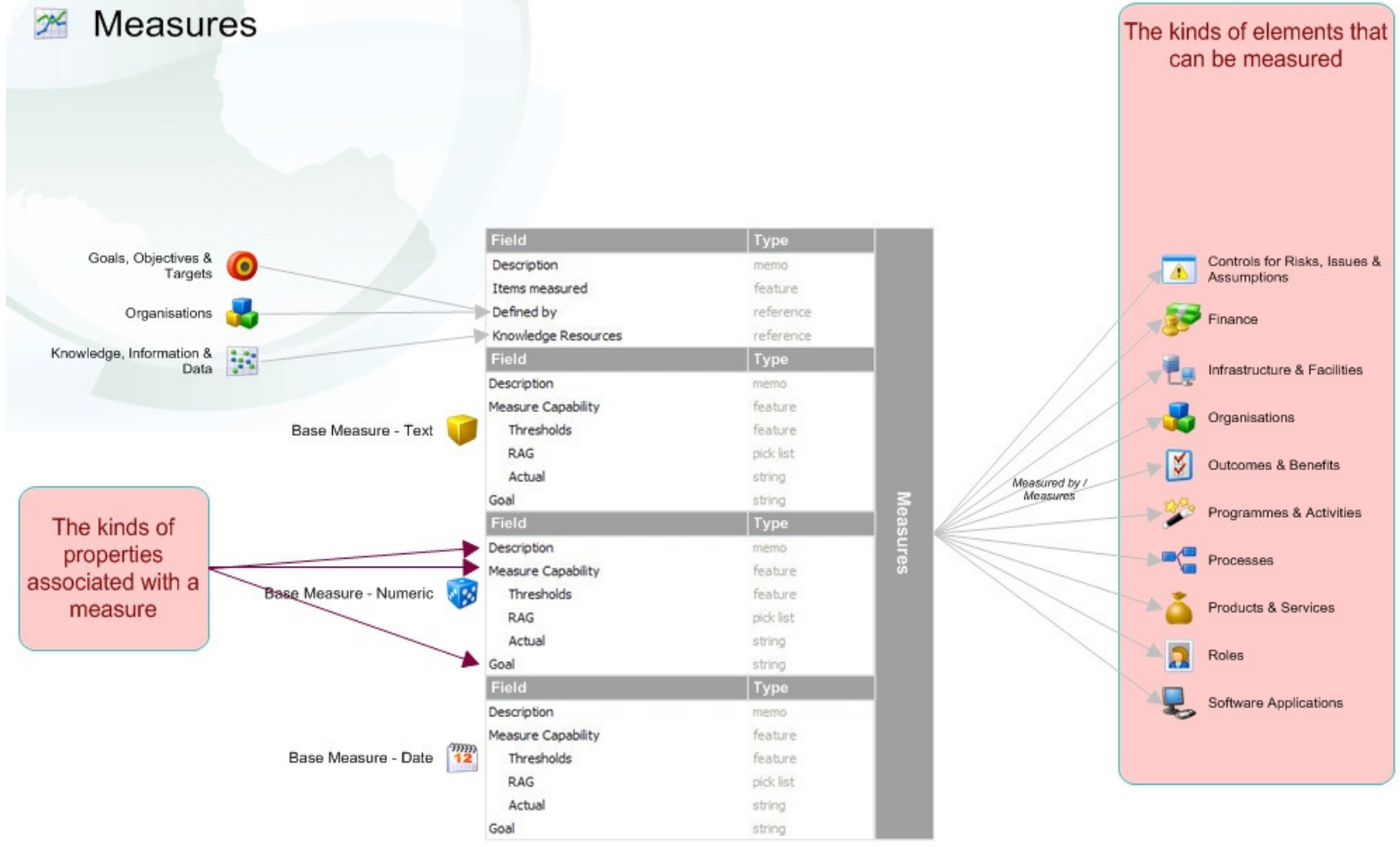
We have generalised this approach to enable any kind of element in principle to be measurable, and therefore to be performance managed through a deployed architecture

Generalised Support for Performance



Measures are defined in general terms with associated properties.

Measures



The kinds of properties associated with a measure

The kinds of elements that can be measured

Any kind of element within the business architecture can be associated with a set of measures by which it is assessed.



Benefits of an architecture approach to portfolio management

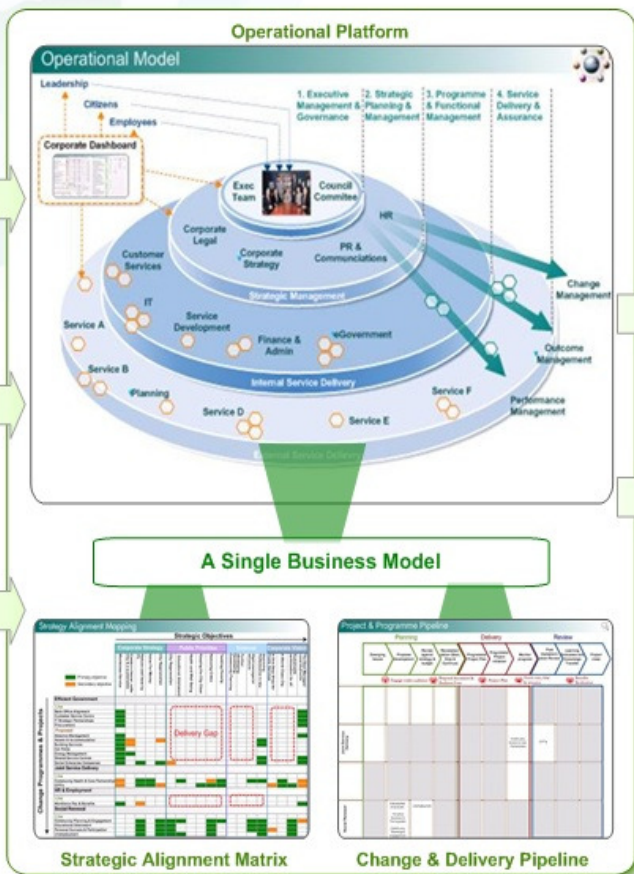


Connecting and synchronising portfolio elements through architecture allows balance to be achieved in a connected environment, where we can identify options and understand the implications across the business.

Collate Information



Analyse



Sense & Respond



Shared, consistent view of the portfolio in the context of the business

Visual suite of dashboards delivered as analytical views

Common business awareness of risk, compliance and regulation - reducing cost and improving efficiency

Single environment shared by diverse communities for understanding and analysis

Common information exploited for many purposes, reducing duplication

Alignment of planned & actual reporting data

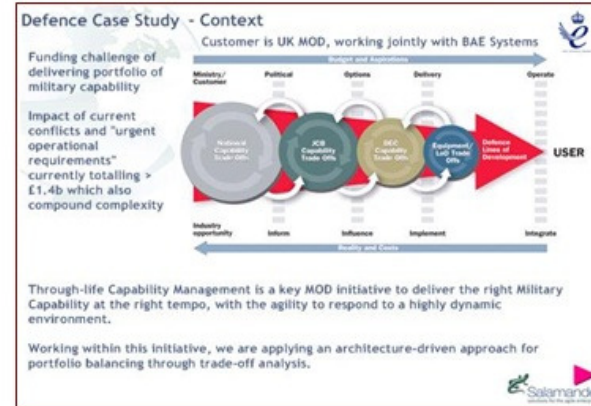
Case studies: Defence and Natural Resources



Defence Case Study:

Through-life capability management

Balancing a portfolio of programmes against a set of projected capability targets

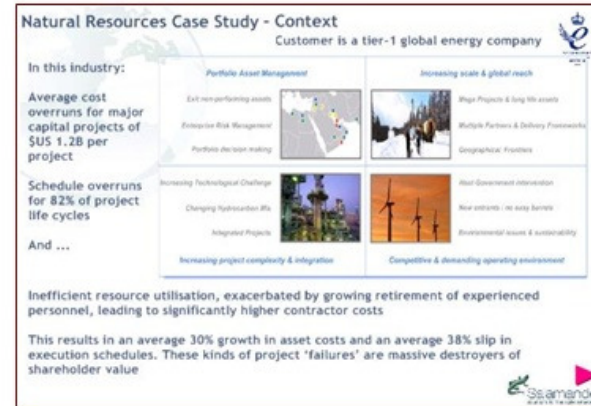


Defence Case Study

Natural Resources Case Study:

Exploration & production management

Balancing a portfolio of programmes against a set of projected future revenues



Natural Resources Case Study



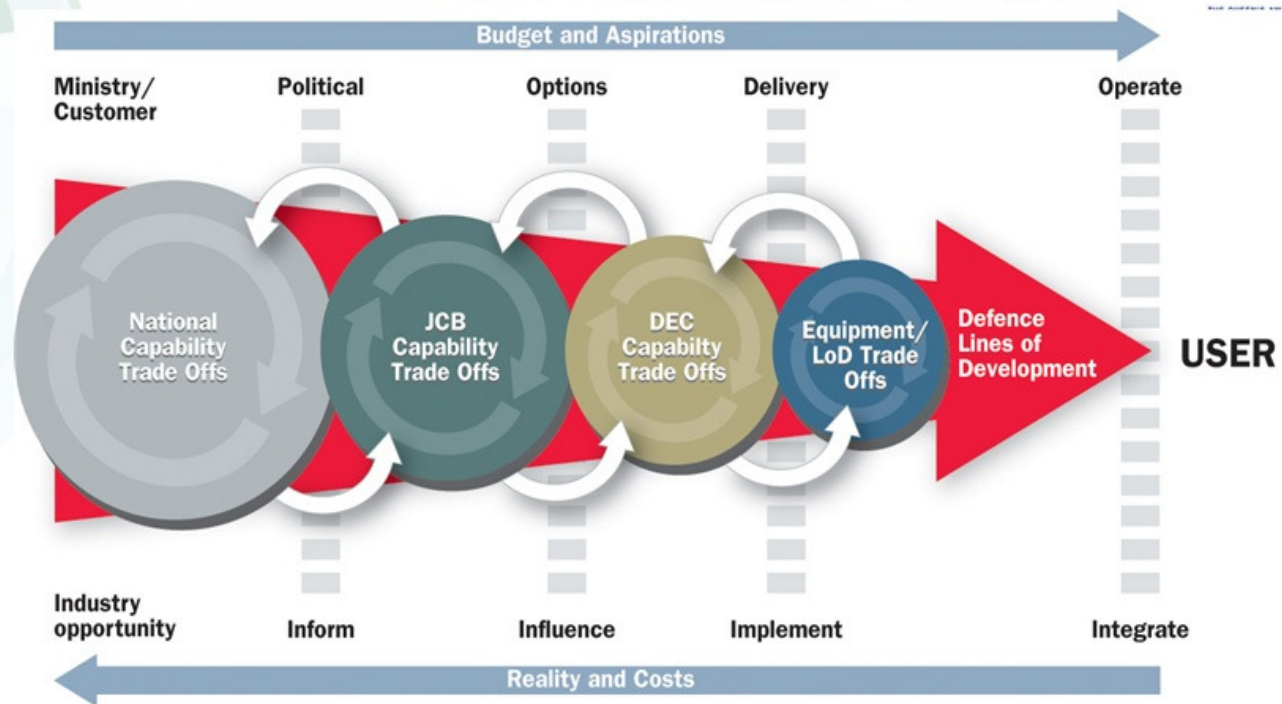
Defence Case Study - Context

Customer is UK MOD, working jointly with BAE Systems



Funding challenge of delivering portfolio of military capability

Impact of current conflicts and "urgent operational requirements" currently totalling > £1.4b which also compound complexity



Through-life Capability Management is a key MOD initiative to deliver the right Military Capability at the right tempo, with the agility to respond to a highly dynamic environment.

Working within this initiative, we are applying an architecture-driven approach for portfolio balancing through trade-off analysis.

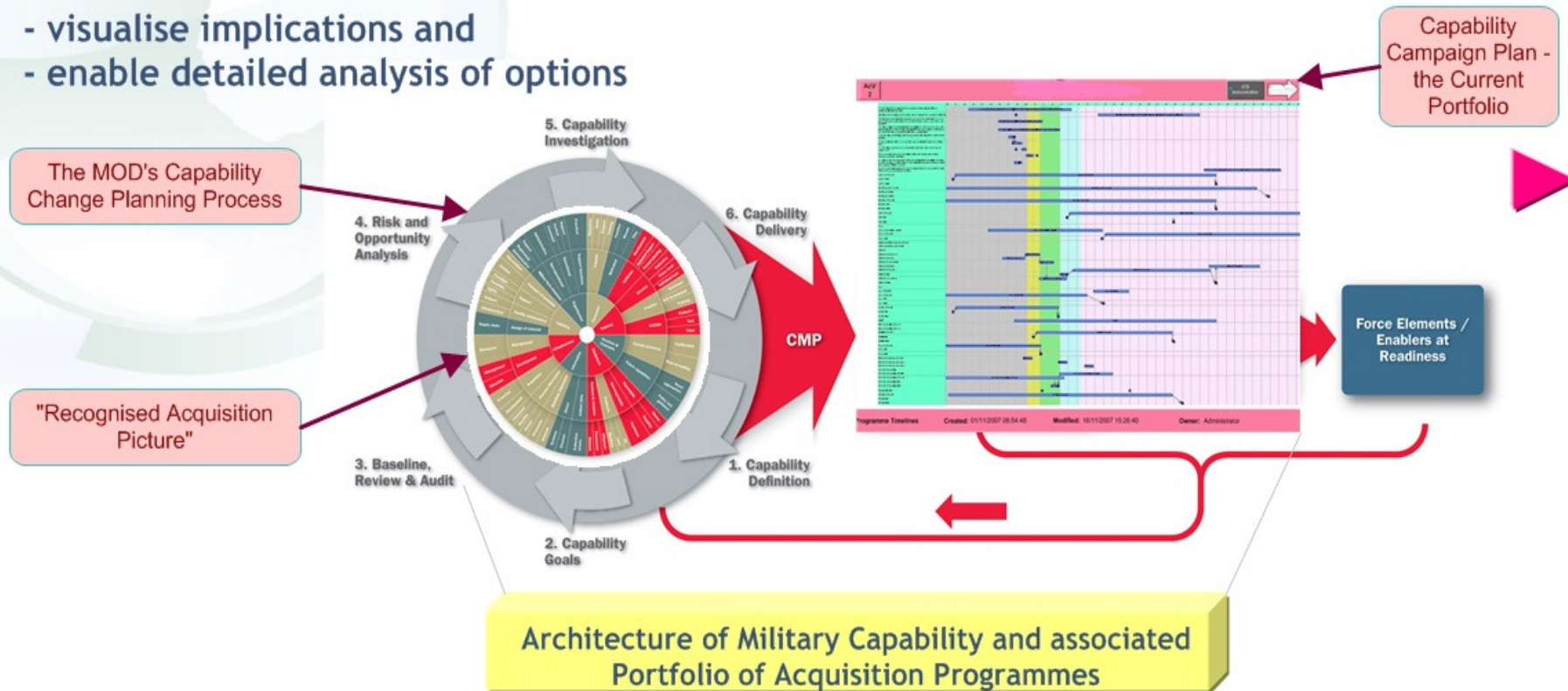


Defence Case Study - Scope & Users



Architecture for Through-Life Capability Management connects portfolio elements with components to:

- visualise implications and
- enable detailed analysis of options

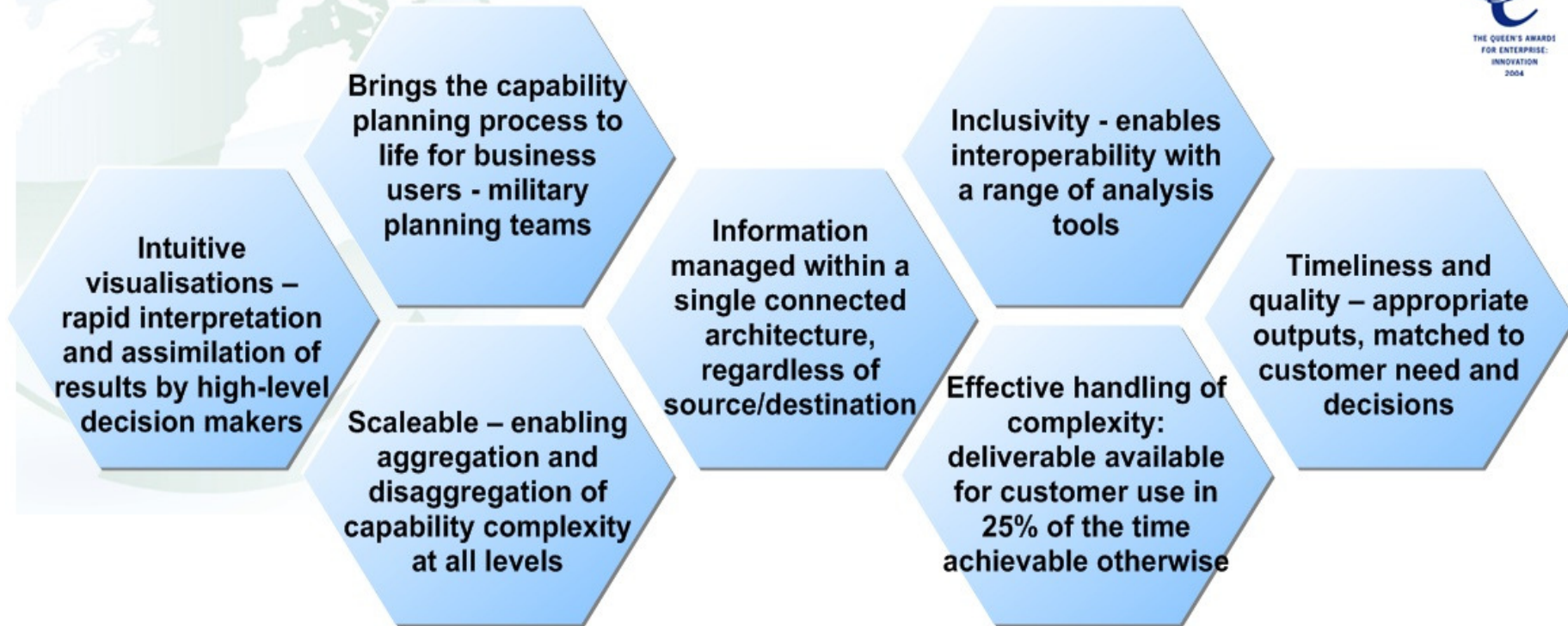


MODAF-based: brings to life capability and programme information from diverse sources to provide a decision-support tool for acquisition

Connecting the threads and the levels through architecture creates a single view of “capability truth” that drives coherence, informing and enabling better decisions



Defence Case Study - Benefits



"... a ground breaking methodology by which we can test various procurement options for applicability against endorsed MOD capability requirements. This will allow us to develop much more rigorous and compelling gap and overlap analysis."

"... a comprehensive campaign plan that is seen as best practice and as a key component of MoD's Through Life Capability Management initiative"

"... customers of one programme have validated benefits of £12.4M, which shows significant value for money against the initial investment"

Natural Resources Case Study - Context

Customer is a tier-1 global energy company



In this industry:

Average cost overruns for major capital projects of \$US 1.2B per project

Schedule overruns for 82% of project life cycles

And ...



Inefficient resource utilisation, exacerbated by growing retirement of experienced personnel, leading to significantly higher contractor costs

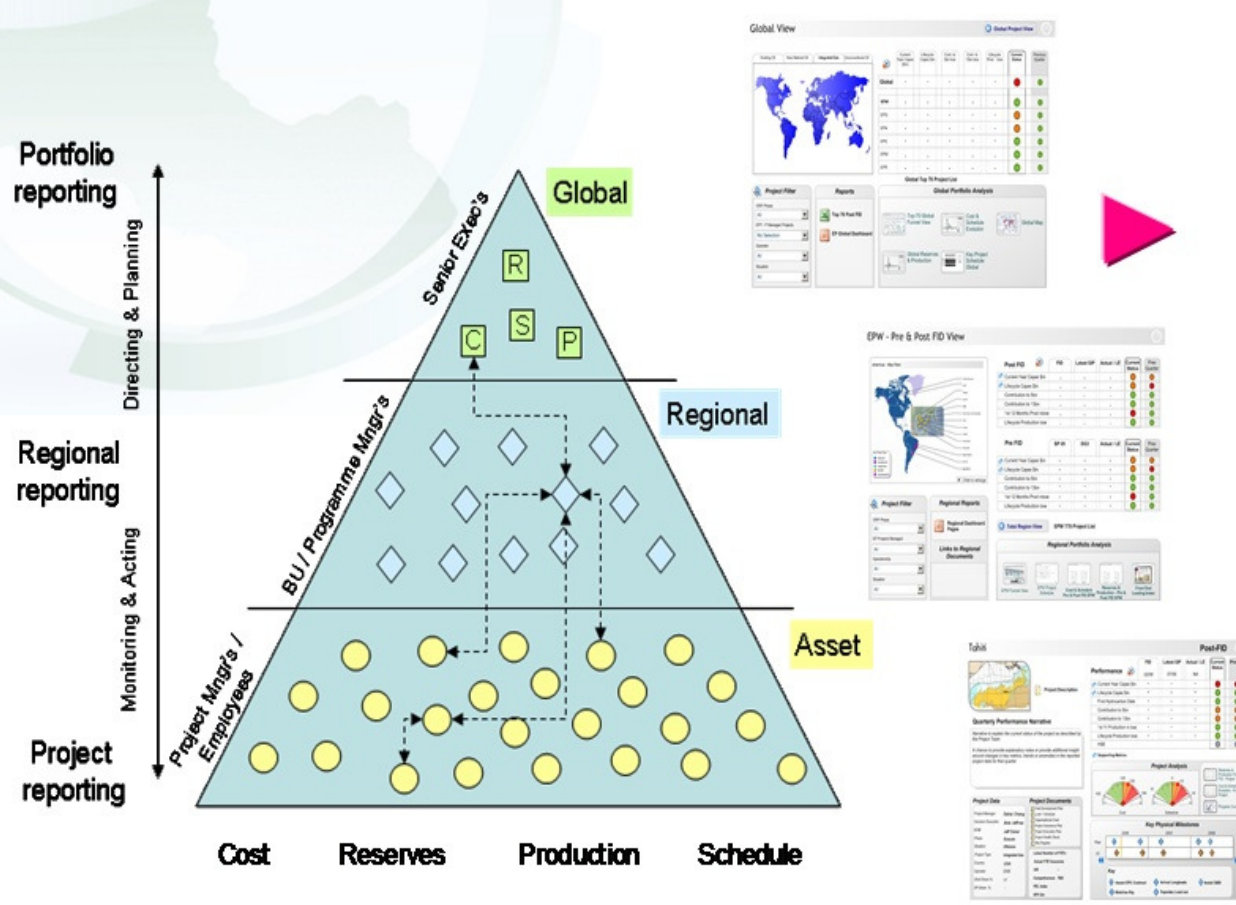
This results in an average 30% growth in asset costs and an average 38% slip in execution schedules. These kinds of project 'failures' are massive destroyers of shareholder value



Natural Resources Case Study - Scope & Users



Architectural approach to portfolio management connects portfolio elements - oil & gas exploration programmes in this case - with wider enterprise to increase analytical power to strategic and business decision making processes.



Dynamic portfolio modelling & configuration.

Sensitivity analysis provides rigorous evaluation of alternative scenarios and risk profiles

Actual and forecast profiles of resource requirements versus constraints over time

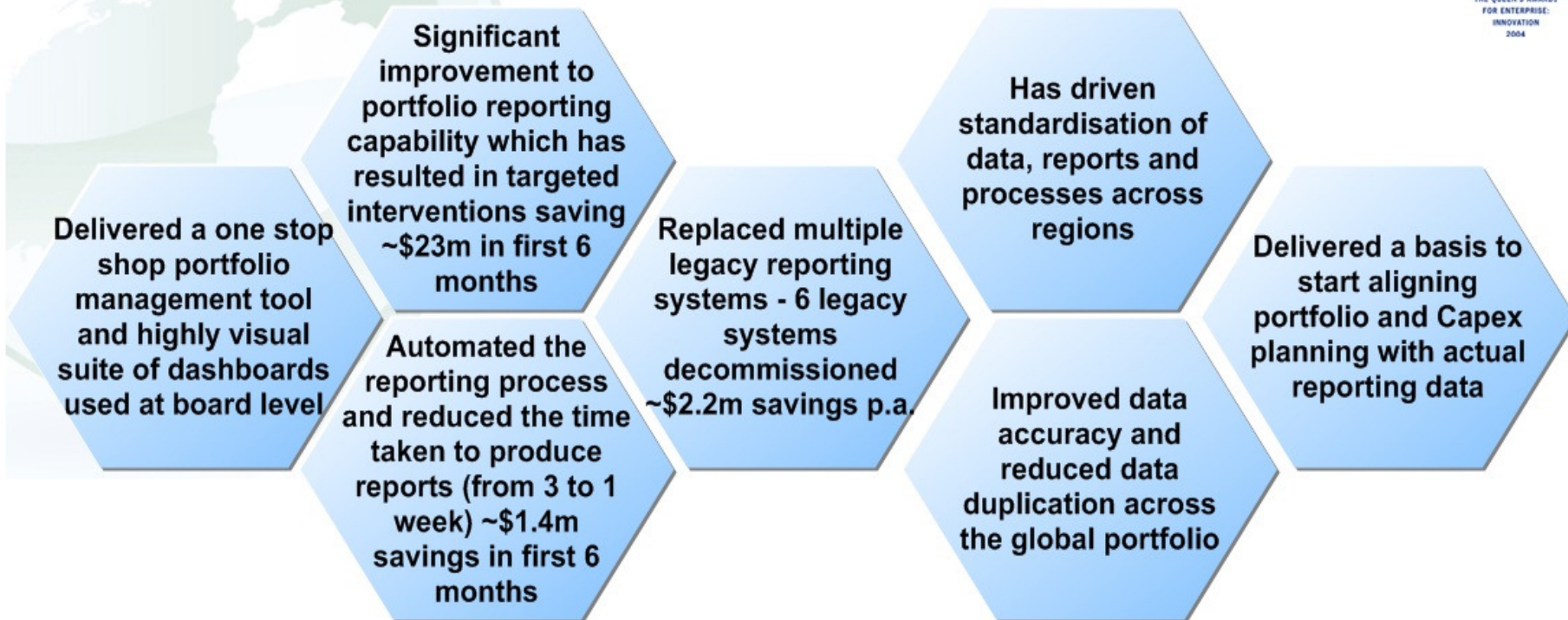
Focused impact assessment of external events, drivers and changing priorities

Targetted interventions: focus management attention on the most critical probable issues to maximise return

Strategy & Planning, Exploration, Drilling/Wells, Producing Assets, R&D



Natural Resources Case Study - Benefits



“Let me assure you that this (system) is vital if we are to establish ourselves as the leading International Oil Company in terms of mega and minor project delivery”

“Support for this system is extremely important to add to individual project efforts to make sure that we manage the whole portfolio as well as we can; we ensure consistent data; consistent information on which management decisions are taken, and on which we allocate resources and essentially take our decisions”

Malcolm Brinded, Head of Exploration & Production, Shell.



Key points and concluding remarks



1. Business Architecture as an operational system offers power to drive portfolio balancing and understand change impact:

- the portfolio is modelled within the wider enterprise, so connectivity with related elements can be explored and planned
- portfolio planners & managers, project managers and other business communities are synchronised through working over the same information - a common view of truth

2. Architecture approach can deliver solid benefits in practice, but standards need to evolve to embrace the wider concepts involved in portfolio performance management

3. Enterprise portfolio management is a key business requirement for all industries

- Applying EA to this problem positions the architecture directly in the business value chain
- This offers a clear ROI that provides recognition and positions architecture as part of the core / fabric, not as a technical adjunct

