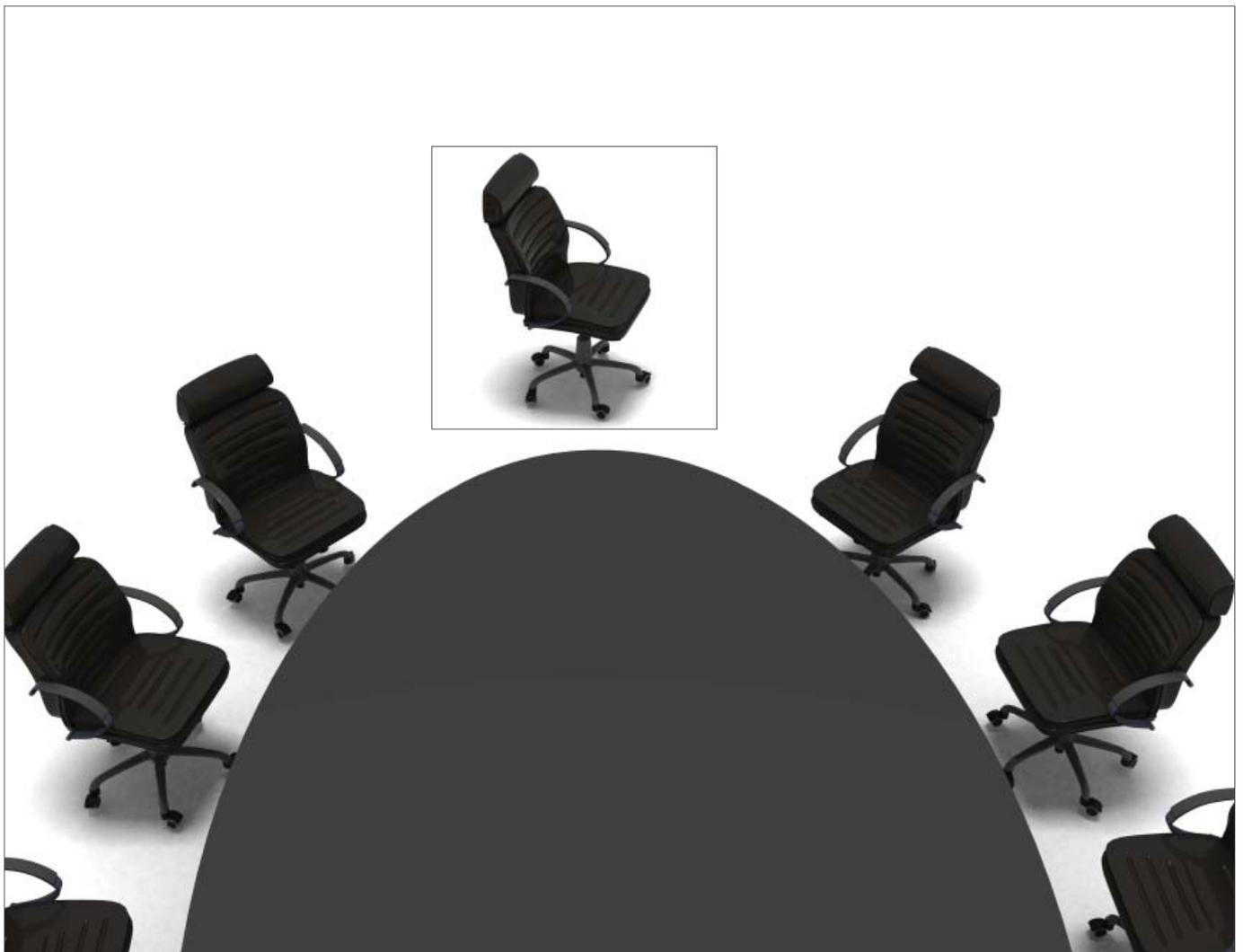


# Executives must rethink

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*Manage IT as a competitive weapon*



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# Executive summary

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Many companies and institutions focus on the investment side of the business case as they assess their Information Technology (IT) investments. In some cases, IT investments are even treated as costs. The Return, i.e. the IT enabling business benefits in line with the strategic agenda, is seldom understood as well as the correlating IT expenditures. Not is it assessed to a similar level of detail. Hence, significant imbalances between IT spend and Return are built into the business case.

Many companies and institutions have large capability gaps to value the IT solution portfolio throughout the lifecycle. They build business cases that cover IT development and the deployment of single projects. However, they cannot conclude on a portfolio level whether or not the portfolio is right today or for that matter tomorrow. A recent example from the Swedish social insurance office unveils the importance in making the right IT investment choices:

*“The social insurance office has spent tens of millions of EUR on a new IT system. It is considered a failure when approximately 15 MEUR of value is being depreciated... The entire system may be phased out, it is ‘too expensive and difficult’”, says Cristine Husmark, Swedish Minister for social security*

Why did this solution fail? How well were the business requirements understood and specified? How was the application and vendor due diligence conducted? Was the implementation project cut into small pieces? If so, why was the project not abandoned earlier?

Surprisingly often, companies or institutions cannot pinpoint whether or not the chosen partnerships are capable of delivering the necessary business value.

Conclusively, these shortcomings in managing IT unnecessarily put enormous financial values at stake and risk to the business operations. As stated by a Volvo CIO:

*“I must lower the IT spend by 15% in the next coming year, but I cannot foresee the implications on operations – we simply do not have this portfolio capability”*

CEOs, CFOs and CXOs ‘feel this pain’. It is critical to have control of this potential value drainer and reduce the complexity built into the IT solution portfolio and its business operations.

Three inter-dependent components need to be in place to make IT a competitive weapon and a true company asset:

- **Empowered business oriented CIO**
- **Master solution portfolio best practices**
- **Apply the right financial valuation models in the right context**

Executives must rethink. IT has a high impact on business operations and must be managed as an executive weapon and a true company asset.

This is done by applying product portfolio management best practices to IT portfolio management, supported by very powerful financial valuation models. This will significantly lower risk in portfolio progression, as well as provide superior ways of driving IT investments. These models have been made available and applicable for business operations.

True support is achieved when this concept brings clarity to the executive decision agenda as the portfolio is created and progressed. What is the level of decision flexibility? Which decisions are needed by whom and when? What options do we have to handle risks and uncertainties involved? Our concept brings a new dimension into the decision process. Executives can compare different portfolio scenarios on level of risk, level of uncertainty and level of technical and commercial maturity throughout the lifecycle. IT can be managed as a competitive weapon.

# Why IT investments fail

Those companies that view IT as a strategic differentiator gain competitive advantages. However, too few companies today have been able to put this into practice, nor on the executive agenda. In many companies and institutions, IT has evolved from the bottom-up and under heavy influences from “IT experts”. This has trapped numerous companies with a legacy burdened IT solution portfolio where phase-in has been a key word but phase-out a rarity. Hereby, significant business values are lost. Figure 1 below illustrates the type of impact an IT solution portfolio has on operations in a company.

This legacy burden requires a significant part of the budget in companies and institutions, although many have been forced to make dramatic, and high risk, cost cuts to improve cash flow. Unfortunately, some CIO’s do yet not possess a sufficient toolbox to drive significant changes in the IT portfolio and at a reasonable level of risk. Many are ‘stuck’ in a reactive mode where they initiate incremental, bottom-up changes to ‘play it safe’. Companies and institutions frequently apply single project approaches to IT rather than solution portfolio best practices.

In addition, they often deploy large IT projects, justified through high level expected business benefits, rather than smaller projects to secure ‘true’ and concrete business benefits as the portfolio is being progressed. Unfortunately, application strategies (IT is core and often the driver) are often applied instead of solution strategies (IT is a component and an enabler). Frequently however, companies and institutions do not even apply application strategies but execute ‘IT investments ad-hoc and based on perceptions by strong stakeholders’. Hereby, business operations are unnecessarily risk exposed.

A senior engineer in a global health care company expressed his frustration with the limited know-how of IT in the executive team:

*“The Executive Team does not understand that IT is ‘not an IT issue’. I cannot understand why they avoid building know-how – we invest millions in IT annually”*

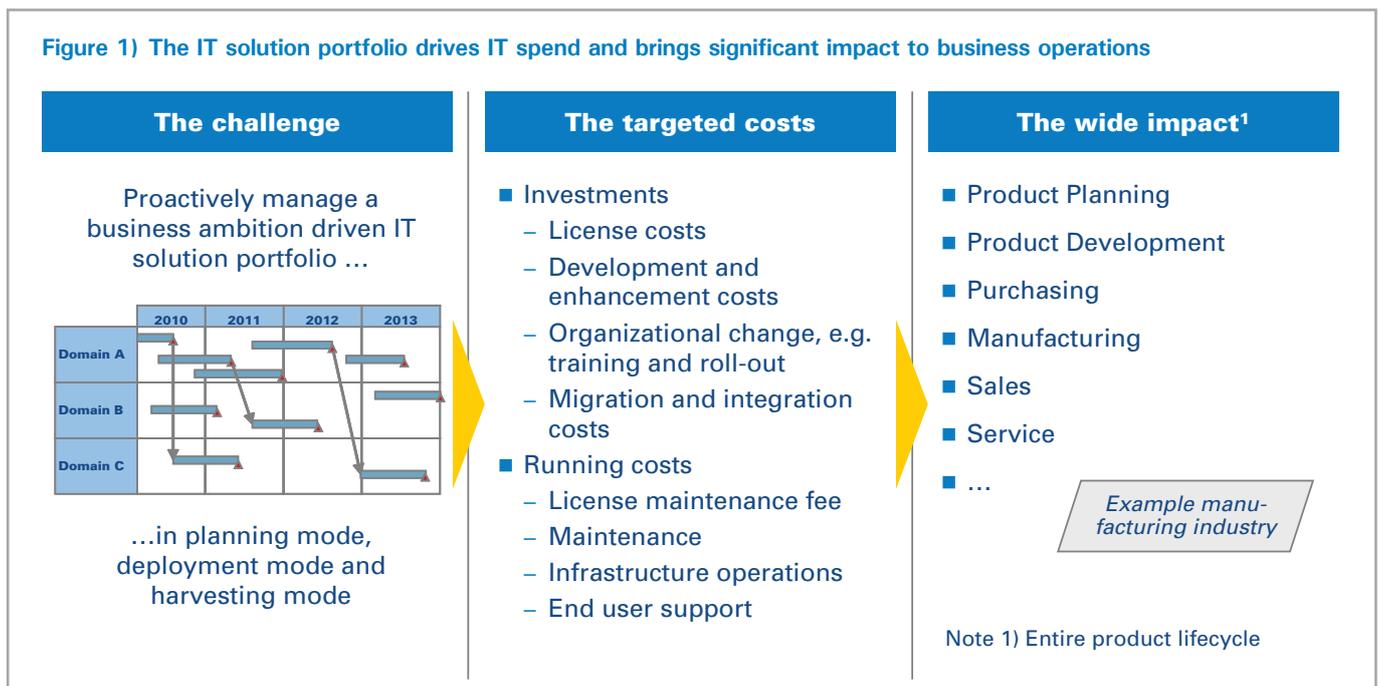
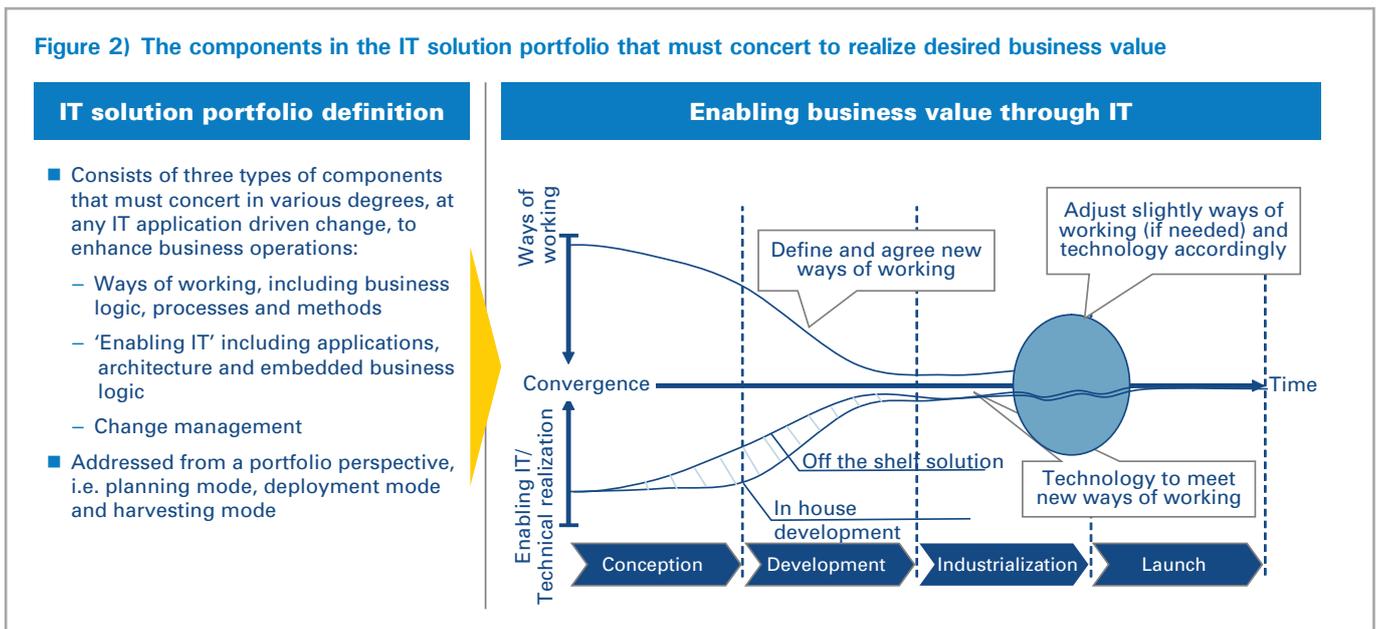


Figure 2) The components in the IT solution portfolio that must concert to realize desired business value



This situation needs to change. Companies should take control of the IT solution portfolio and transfer it from a legacy burdened state with project approaches to a business ambition driven state with a portfolio approach. Figure 2 above describes the key components that coherently build up an IT solution portfolio, and how they enable business value through new/modified IT.

In addition, businesses need to apply the right financial models in the right context. Currently, traditional business case models often assess the Net Present Value (NPV) at a discount rate practiced in the company or institution (Weighted Average Cost of Capital (WACC) is commonly applied). Such models are adequate in deployment mode where a single project is evaluated (scenario or not), time to availability is reasonable and technical solutions viable. However, in a portfolio setting the CIO needs to manage the portfolio in planning mode, deployment mode and harvesting mode to address phase-in/out activities etc. In this context, these models may bring faulty conclusions to the table, as will be described later.

Conclusively, companies need to address three different but coherent topics to be able to transform the IT solution portfolio from a legacy burdened state to a business ambition driven state

- Empowered business oriented CIO
- Master solution portfolio best practices
- Apply the right financial valuation models in the right context

*A county council struggled significantly in a project to reduce IT legacy systems to reach a number of financial and operational benefits. This large project (four years and roughly 20 MEUR) was abandoned after 3 years and approximately 40 MEUR spent.*

Source: Management of Technology, #3 October 2009

# Empowered business oriented CIO

The often reactive, bottom-up and project based, IT solution portfolio, needs to be addressed by an empowered business oriented CIO. Although a CIO faces his/her own unique challenges, the role shares many characteristics and principles of action with the Head of Product Portfolio. Both these roles operate within business critical domains where right or wrong decisions can have significant influence on business operations. Both constitutes the link between business requirements and strategic direction - do the right things - and deployment - do things right. Hereby, they need to efficiently manage the progress of the portfolio throughout the lifecycle. However, neither one owns the right themselves to make significant changes in the portfolio. They own the right to recommend actions like phase-in/out, upgrades, and new versions to the adequate decision bodies. These are often specific boards with cross-functional representation, e.g. IT Board, Product Board, Investment Board. Their power to influence lies to a large extent within their power to recommend.

It is a vital CIO capability to nurse the aggregated agenda. This includes to balance the more costly special features needed for supporting critical competitive business capabilities with the ambition to provide general usable solutions to many. To succeed, the CIO must have a deep business understanding. Figure 3 illustrates the similarities in managing portfolio progress between a

Head of the Product Portfolio and a CIO. The figure also illustrates the similarities on the highest level between developing new products and new IT solutions.

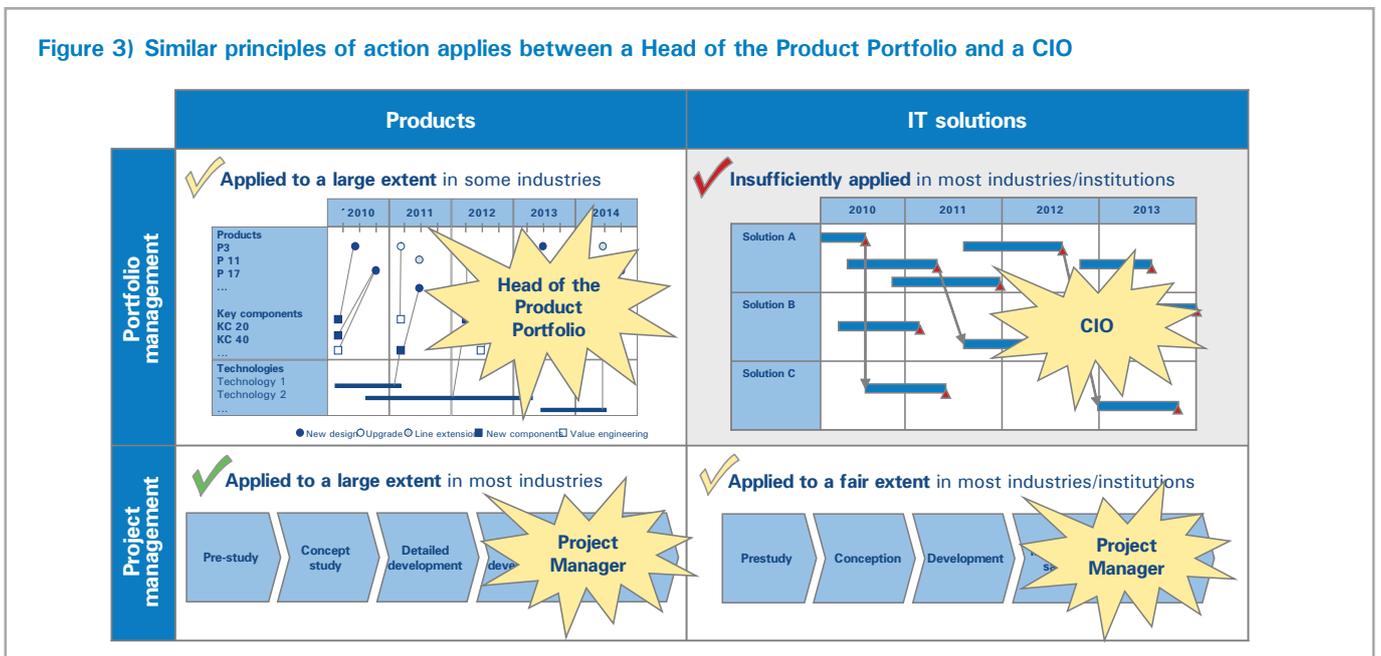
Furthermore, a CIO is not always provided a chair on the company's executive team<sup>1)</sup>. To lead the transformation of an IT solution portfolio from a legacy burdened state to a business ambition driven state 'solely' with the power to recommend may not do. The role of the CIO needs to be sufficiently empowered and business oriented to lead a transformation of this kind and to manage the new state. A Volvo CIO viewed his empowerment as:

*“Currently, my role and responsibility is vague. However, my accountability is there...”*

Another Volvo CIO articulated his challenge to significantly cut the IT spend in a controlled way as:

*“I must lower the IT spend by 15% in the next coming year, but I cannot foresee the implications on operations – we simply do not have this portfolio capability”*

Figure 3) Similar principles of action applies between a Head of the Product Portfolio and a CIO



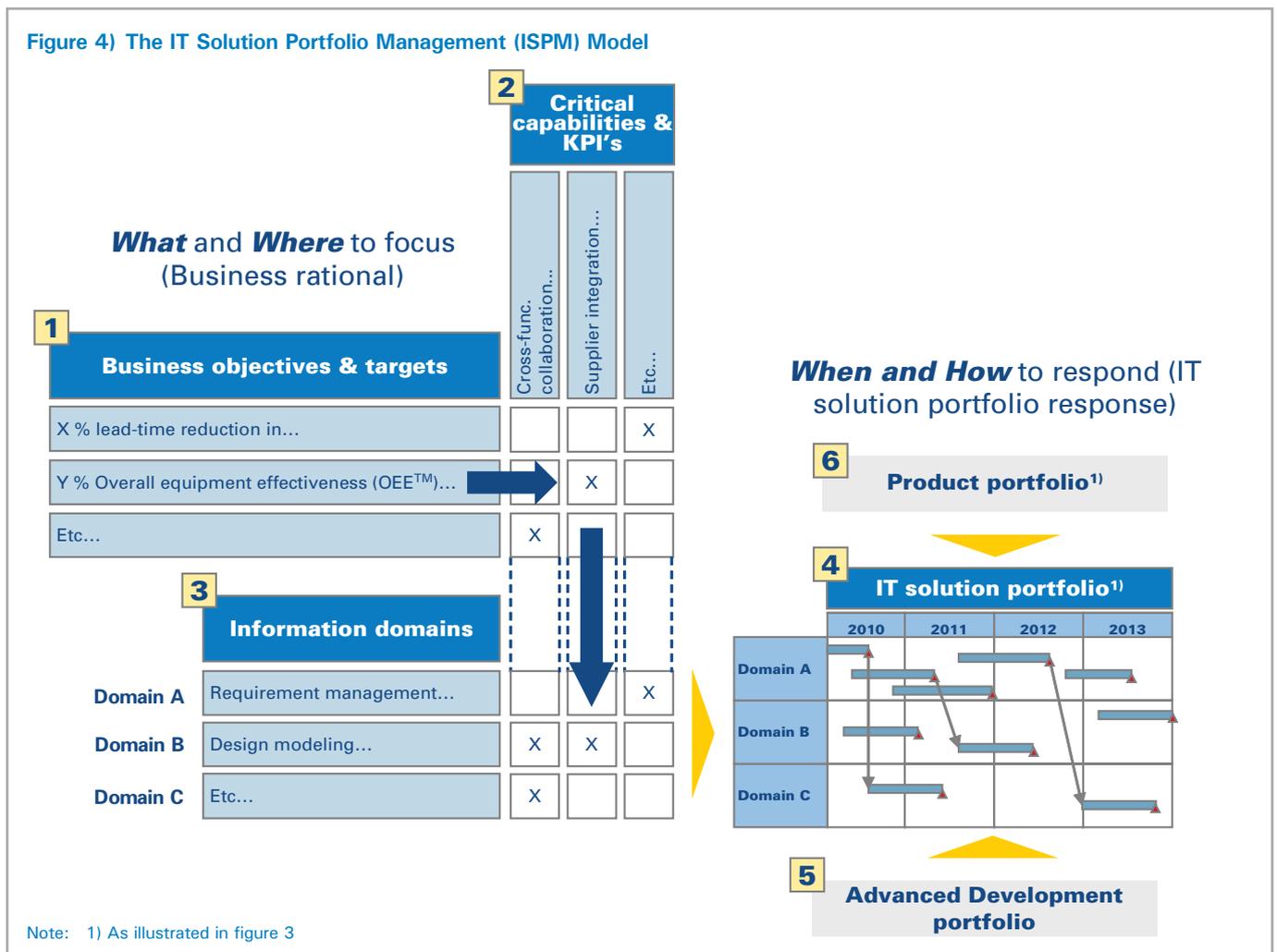
Note: 1) A CIO's business orientation and empowerment can vary between industries and geographies. In the US for example, the CIO is very empowered.

# Master solution portfolio best practices

Many CIO's lack adequate tools and techniques to relate IT response to business needs. A root cause to this dilemma lies in the 'black box' between (1) business objectives and (4) IT portfolio solution response. Our IT Solution Portfolio Management (ISPM) Model unveils the key pieces in the 'black box' that the CIO needs to manage (not own) to build/request a business ambition driven IT solution portfolio. Recall that the solution portfolio drives significant parts of the IT spend and sets the prerequisites for the harvesting mode. In addition, it guides the make/buy/collaborate choices (the sourcing strategy) - it better be right! Figure 4 below illustrates the ISPM model with its six main steps.

## Description of the ISPM model and its value add

As Figure 4 illustrates, the ISPM model starts with the business objectives and targets. This ambition needs to be broken down and described at a reasonable level of detail, as illustrated in step 1. In parallel, the critical capabilities needed in the organization as well as their correlating Key Performance Indicators (KPI's) are defined, which is illustrated in step 2. The business objectives and targets provide, together with the capability gaps to be closed, the focus and priorities that the business side place on the IT solution portfolio.



Hereby, the prioritized capabilities are in essence the optimization criteria for the information domains in step 3. By understanding how to optimize the information flow, the prerequisites of creating an optimal IT solution portfolio is clarified. However, this is not done successfully unless it is known where the information is created and where the information is used and benefitted. Often, companies go wrong at this point leading to faulty optimizations and prioritizations, why business objectives and targets are not met. A good understanding of the upper part of the ISPM model is essential for companies to be able to build the ambition driven business case for the IT solution portfolio. This business case is also validated bottom-up through the ISPM model.

In the interaction between steps 3 and 4 the business demands are translated into the IT solution portfolio response. This is where the business benefits are projected into an IT solution portfolio ultimately enabling the roadmap. In this projection it is essential to understand how to build enabling activities where each activity delivers business value. To secure the business value, each activity needs to be seamlessly integrated with the processes, the business logic, the application landscape and the underlying architecture that carry the application landscape. Thus, step 4 is the exercise to understand the sequence in which activities are needed and then logically integrated in order to realize the business case.

In these types of IT related change management activities it has not been common to run pre-development activities in the same way as with traditional product development. This is a surprise since many companies in traditional product development apply such activities almost as standard procedures. Step 5 includes such pre-development activities through an advanced development portfolio and utmost the enabling advanced development roadmap. Applying this mindset gives several advantages, e.g. you pay for an option to learn and reduce risks in areas of high uncertainty. Necessary competencies as well as a better understanding of needed organizational change efforts are built. By preparing “off-the-shelf” components the likelihood of success in realizing the IT solution portfolio, including timeliness, is significantly improved.

In the manufacturing industry, major changes in the IT solution portfolio are in many cases deployed through product development projects to meet new needs. Therefore, the product plan is another element that guides when in time changes shall/can occur (step 6 in the model).

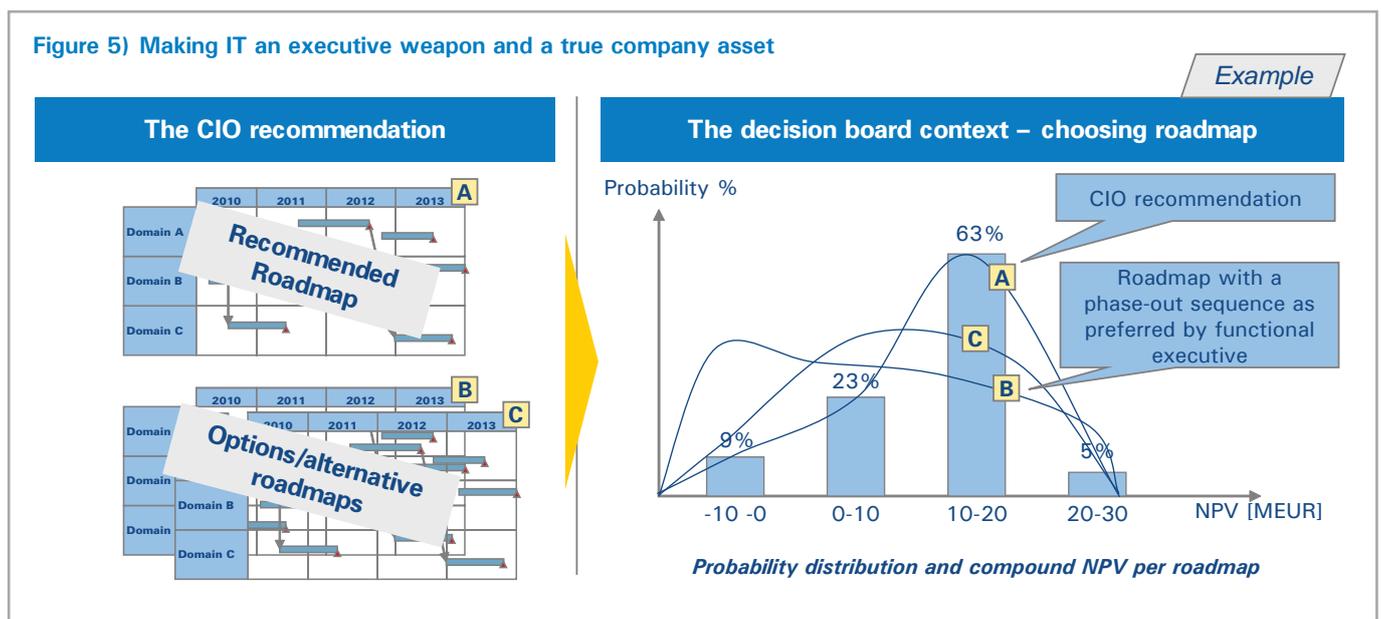
*“By applying the ISPM model in our annual strategy process, we can in our management team pursue an IT agenda fully in line with our business strategy”*

*–Volvo Business Executive*

# Apply the right financial valuation models in the right context

The sole purpose of the financial models applied are to bring as relevant and adequate decision basis to the table as possible as the IT solution portfolio (i.e. roadmap) is being executed. True support is achieved when it brings clarity to the decision agenda as the roadmap is created and progressed. What is the level of decision flexibility? Which decisions are needed by whom and when? What options do we have to handle risks and uncertainties involved? To make consequences of choices obvious and transparent, a real option approach has been chosen. Figure 5 below illustrates a situation where the CIO brings a recommendation up for decision. It may be a significant investment decision at hand. The financial modelling applied to the portfolios brings a new dimension into decision preparatory. Management can compare different roadmaps at different levels of risk, different levels of uncertainty and at different level of technical and commercial maturity. The recommended roadmap's financial projection below is a true simulation example from a specific part of the IT solution portfolio at Volvo.

Unfortunately, many companies still apply project models on portfolio progress. From a financial standpoint, traditional NPV calculations are commonly applied. These models are adequate in deployment mode where a single project is evaluated, time to availability is reasonable, and technical solutions viable. However, they assume that the investment is a now-or-never proposition. Also, they fail to account for flexibility and options that the investment might open up as the initiative – portfolio or part of the portfolio – is progressed. Recall that such a capability is critical for a company in terms of negotiation power with application software providers. In addition, traditional methods are not built to advice portfolio progress, but to guide project progress in the short to medium term. Therefore, traditional NPV models may even bring faulty conclusions to the table.



# Conclusion

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Executives must rethink. IT has a high impact on business operations and must thus be managed as an executive weapon and a true company asset.

This is done by applying product portfolio management best practices to IT portfolio management, supported by very powerful financial valuation models. This significantly lower risk in portfolio progression, as well as provide superior ways of driving IT investments. These models have been made available and applicable for business operations.

True support is achieved when this concept brings clarity to the executive decision agenda as the portfolio is created and progressed. What is the level of decision flexibility? Which decisions are needed by whom and when? What options do we have to handle risks and uncertainties involved? Our concept brings a new dimension into the decision process. Executives can compare different portfolio scenarios on level of risk, level of uncertainty and level of technical and commercial maturity throughout the lifecycle. IT can be managed as a competitive weapon.

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