DEVELOPMENT MANAGEMENT OFFICE

Portfolio-Based Development Governance
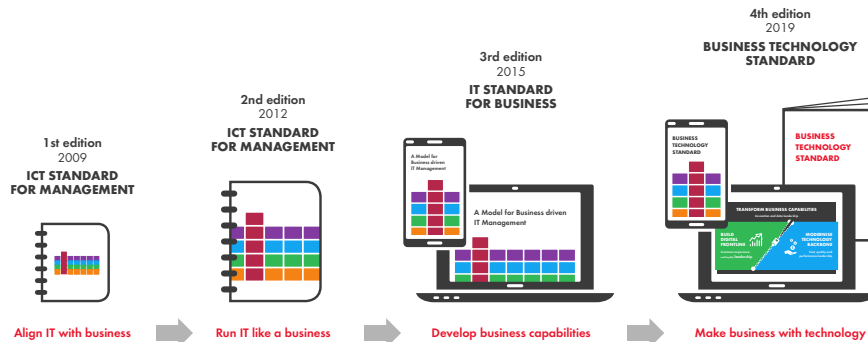
ARTICLE

About Business Technology Standard

The Business Technology Standard (or BT Standard) is an open-source management framework to plan, build and run information technology in today's technology-driven business world. It has been constantly developed and renewed during the past 10 years with global companies and public organisations. It is recognised today as one of the leading best practices and used in hundreds of globally operating companies and public organisations, especially in Nordic countries.

The fourth edition has been completely rewritten and upgraded, and the scope of technology management has been extended from information technology to business technology.

1st edition 2009
ICT STANDARD FOR MANAGEMENT

Align IT with business

2nd edition 2012
ICT STANDARD FOR MANAGEMENT

Run IT like a business

3rd edition 2015
IT STANDARD FOR BUSINESS

Develop business capabilities

4th edition 2019
BUSINESS TECHNOLOGY STANDARD

Make business with technology

The Business Technology Standard has been developed by the Business Technology Forum, a community of forerunner companies and organisations collaborating based on a platform economy model where every company can benefit from each other's development input and efforts.

CONTENTS

1   What is the Development Management Office?

In order to answer the question, we need to first discuss what portfolios are. Portfolio is a collection of end-to-end flows, and it has visibility on demand, development, and services. The key measurement driver for portfolio management is the created business value. In practice, Demand and Development portfolios are often evaluated in one portfolio steering and Development Management Office (DMO) supports this part of the steering.

Portfolio management oversees Demand & Development portfolio. It is comprised of the Portfolio Steering, decision making body, and Development Management Office, the facilitator.
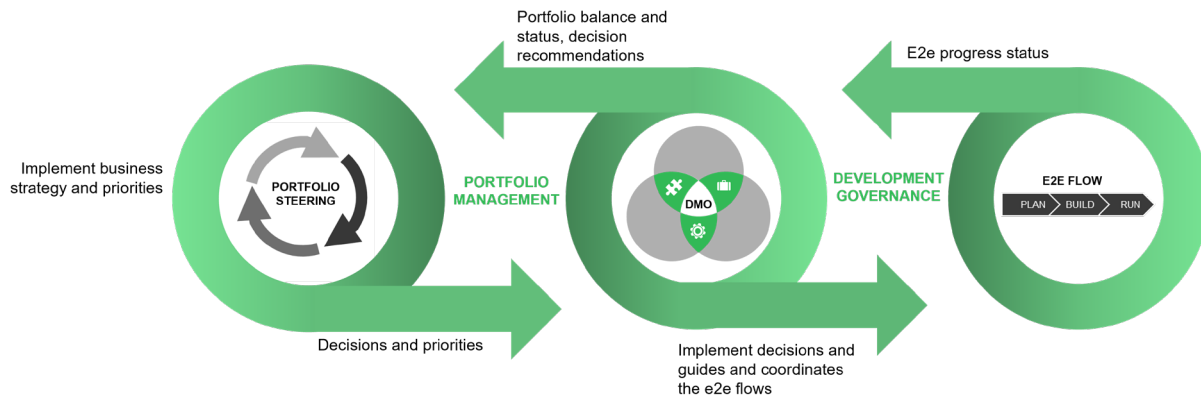
Figure 1 *Portfolio management*

Development Management Office, DMO for short, governs the Demand and Development portfolios across the entire enterprise. It supports portfolio and value stream steering in maximising business value creation from the demand and development phases and minimising development risks. In essence while portfolio steering and value stream steering are the decision makers in the enterprise and values stream levels respectively, the DMO supports them by performing the preparation and follow-up work related to that decision-making. In addition, the DMO defines the rules for development discipline and supports the teams in following those disciplines.

Figure 2 *Development Management Office views*

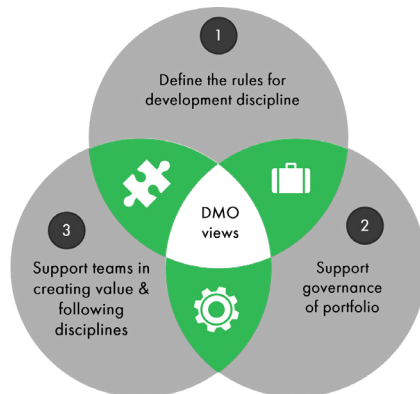The DMO validates development requests and coordinates dependencies between development initiatives. Together with Business Owners it proposes development initiatives, based on potential value, to be included, rejected, passed forward or removed from the demand and development portfolios. It provides visibility and up-to-date status for the entire Demand and Development portfolio.

The DMO sets, promotes and continuously develops demand and development management practices to manage risks and provide the most value. Most importantly, it oversees and coordinates resourcing between development initiatives. Furthermore, it typically manages the Project Portfolio Management (PPM) tooling that offers support for the above-mentioned tasks as well as to the development teams.

Structure of this article

The introduction of the Development Management Office in this article is structured around several topics:
- Management of the DMO discusses the roles and capabilities needed to fulfil DMO responsibilities as well as roles that frequently interact with the DMO to fulfil development goals.
- Supporting Portfolio Steering discusses portfolio management principles, certain decision points and the yearly clock related to the DMOs supporting role in governing the demand and development portfolio.
- Demand Governance introduces the flows and procedures for demand management.
- Development Governance introduces the different development types and further BT Standard extensions.
- Resource Management discusses how to implement the resource management process.
- Business Case Follow-up describes the DMO's role in business value creation.

2   Management of the DMO

The DMO team needs to have the right roles and capabilities to ensure that DMO responsibilities run smoothly. These responsibilities include having and using the best possible structures, processes, methods, and tools needed for managing demand and development. The DMO also fosters good development culture and is focused on delivering value and the best possible results. Therefore, the teaming requires way of working experts as well as a coaching skillset. The DMO also requires a certain amount of capacity to manage demand and development initiatives. This requirement is dependent on the volume of development in the portfolio or value streams.
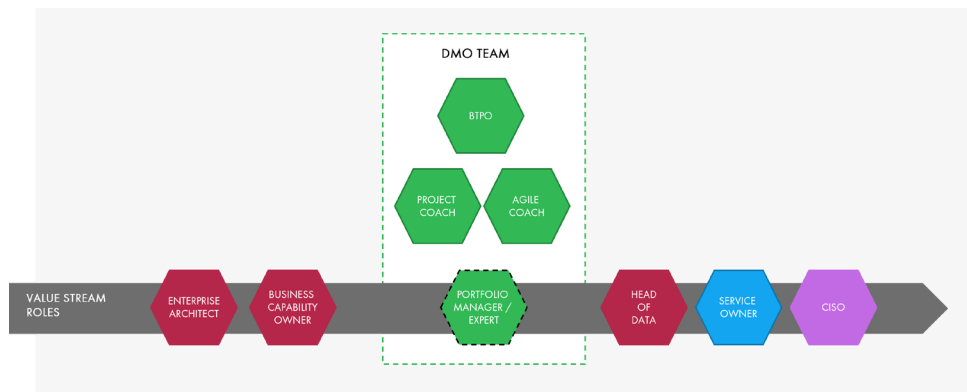

Figure 3 *DMO roles and key roles in value streams for managing demand and development*

The DMO is led by the Business Technology Portfolio Officer (BTPO). The BTPO and DMO support the portfolio steering group and value stream steering groups, if applicable, by facilitating the decision-making process. To do this, the BTPO is responsible for looking after cross value stream dependencies, collaboration, and business change management, as well as coordinating resource management. They also oversee the benefit management process and support guidance and tools.

In larger organisations, the BTPO is typically supported by coaching roles dedicated to projects and agile development. These roles are responsible for optimising processes, methods, and tools for managing development, as well as offering training in these areas as needed. They also support Project Managers / Scrum Masters and follow up how development flows are managed. Coaches also actively fetch feedback from development flows about processes, methods, and tools.

In organisations where value streams are in place, the DMO is represented in value stream by the Portfolio Manager. They secure visibility to value stream status and reporting. The Portfolio Manager creates and updates roadmaps for the value stream and facilitates decision-making in the value stream and ensures preparation of decision-making materials.

3   Supporting Portfolio Steering

The DMO ensures that an organisations' strategic intent is met in development by supporting the portfolio steering in all its activities. Business Technology is governed on three levels: enterprise, value stream and end-to-end flow. The DMO supports the activities on all these levels.
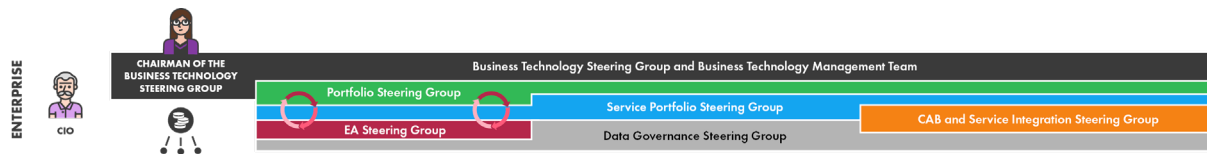

Figure 4 Enterprise Portfolio

The enterprise level portfolio steering group makes cross-value stream decisions and authorises value streams and end-to-end flows. The DMO has a key role in governing the enterprise portfolio and supporting decision-making by providing full visibility into development initiatives.

To ensure that value creation is maximised, initiatives with better strategic fit and higher business value are given priority. The DMO proposes which demand and development end-to-end flows are to be taken and kept in the portfolios and which ones are rejected or removed from the portfolio. The DMO ensures that informed decision-making visibility to an up-to-date portfolio is available as well as an executive level reporting and dashboard on portfolio status and forecast. It also organises business value realisation measures and share lessons learned.
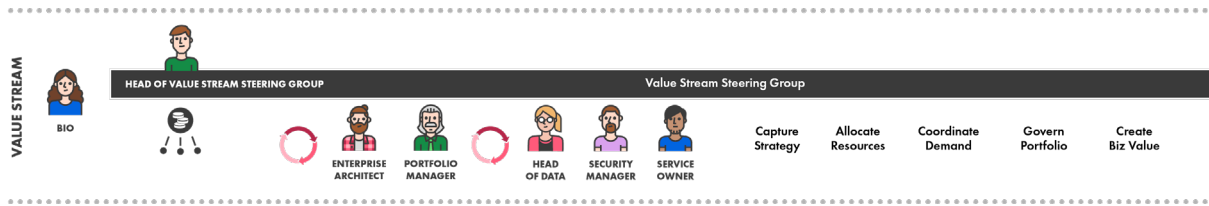
Figure 5 *Value stream Level portfolio*

The **value stream portfolio steering group** governs its end-to-end flows and makes cross end-to-end flow decisions. It authorises or deauthorises initiations and continuations of individual end-to-end flows. The DMO's role is to support value streams in governing their development portfolios.

Value stream steering, with the support of the DMO, follow these principles:
- Business strategy and strategic changes are analysed, and a plan is formed on how Business Technology will be part of the strategy implementation.
- Resource allocation - business strategy sets the high-level priorities and investment frame for business technology. This is the budgetary annual allocation of financial and human resources for development.
- Demand is multi-sourced and has different formats. Portfolio has the responsibility to organize and authorize the development flows.
- Portfolio steering approves and rejects development initiatives as well as requests and follows up on the business value creation in flows.
- Business value - business driven design, development and rollout are essential for the business value creation.
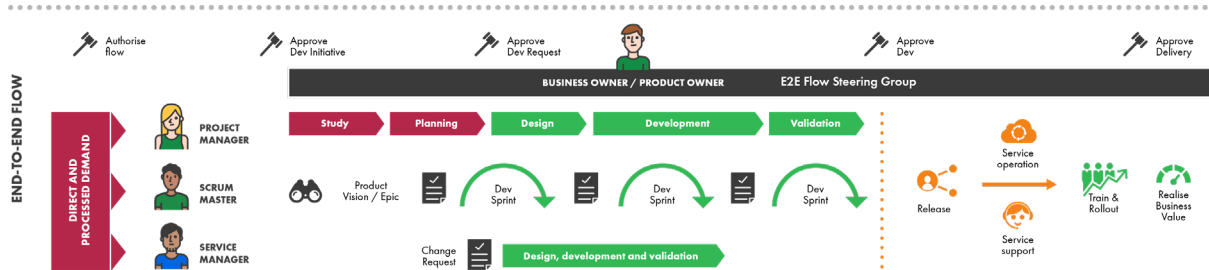
Figure 6 *End-2-end flow*

Business Owners, with the support of the steering group or Product Owner, steer an individual end-to-end flow. The DMO provides practices for steering and managing end-to-end flows. DMO supports end-to-end development flows for resolving conflicts of interest or dependency problems. It sets and follows up practices for managing demand and development portfolios.

Portfolio steering is tied to decision points (gates) of the development flows and operates on the annual clock. Portfolio planning is typically performed twice a year aligning with enterprise planning and budgeting cycles. Planning creates development focus areas aligned with strategy, investment frames, as well as key priorities.

Figure 7 Annual clock

Strategy Meeting (Every six months)
Strategic Decision-Making
- ✓ Budget and investment plan
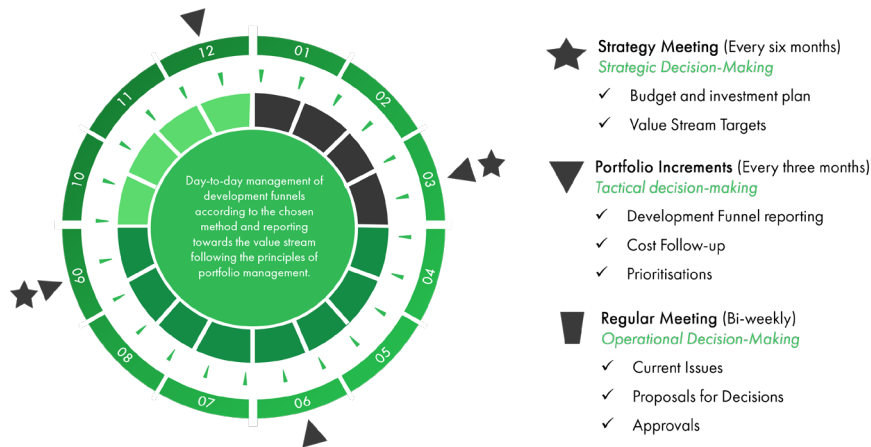- ✓ Value Stream Targets

Portfolio Increments (Every three months)
Tactical decision-making
- ✓ Development Funnel reporting
- ✓ Cost Follow-up
- ✓ Prioritisations

Regular Meeting (Bi-weekly)
Operational Decision-Making
- ✓ Current Issues
- ✓ Proposals for Decisions
- ✓ Approvals

The portfolio is reviewed on a quarterly basis in the portfolio increments meetings. The status of the portfolio is checked and follow up on value creation is performed. These meetings also provide an outlook on the portfolio and upcoming roadmap. Regular meetings are held bi-weekly, when/if necessary, and the focus is on on-going development initiatives and gate decisions. At regular steering meetings and based on the DMO's report and proposals to value stream/portfolio steering, the steering group checks the status of the portfolio, and decides on corrective actions if needed. It also decides on the portfolio gates.

Development Management Office is comprehensive and governs the demand and development portfolios across the entire enterprise.

4   Demand Governance

The DMO ensures that business requirements and feedback from production are managed systematically and in accordance with the Business Technology Standard Operating Model. It captures, categorises and validates the demand and provides decision proposals for the portfolio management / value stream steering group. The DMO also sets and follows up practices for managing demand.

There are three different types of demand in Business Technology Standard, that fall under the domain of DMO.

Table 1 Characteristics of types of demand

Capability Planning	Ideas & Concepts	Increment & Improvements
"Plans major business capability development"	"Generates new ideas and challenges the status quo"	"Enhances to existing business solutions or capabilities"
• Processed demand • Creating new and changing existing business capabilities • Significantly changing how things are done • Requires a feasibility study • Typically, large scale development • Typically needs focus on Business Change Management activities • Roadmap based with longer lead times	• Processed demand • Experimenting and creating something new • Typically, small scale experimentation • Scale of possible further development unknown • No need for Business Change Management activities, at least in the beginning • Fast response times	• Processed or direct demand • Improving existing solution • Adding new features or functionality • Requiring limited feasibility study if any • Medium or small scale of development typically done in existing development teams • Limited focus on Business Change Management • Aiming at fast response times and speedy development cycles

Different types of demand are evaluated differently in the demand flows, but, in the end, evaluations in demand flows can be simplified to a seven-point checklist. If all the points on the list are covered in a sufficient manner, the initiative is ok to proceed. The DMO's role is to enforce this list as well as offer support and tools.
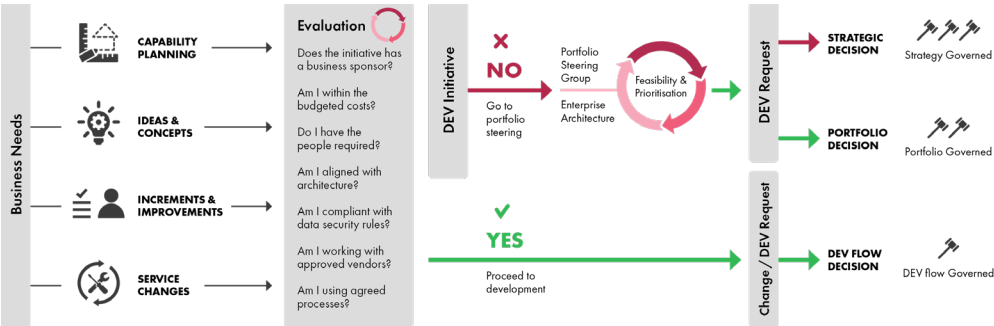

Figure 8 *Simplified demand management with Minimum Viable Governance.*

While supporting demand management, the DMO ensures that the decision-making is informed based on certain focus areas. Every development initiative needs to be aligned with business strategy and provide value. The benefits a business case contains, and the total cost of ownership are considered. Opportunity costs, such as the cost of not doing or delaying the development need to be evaluated. Additionally, while evaluating proposals, their dependencies on other development and associated risks require consideration as well.

Finally, using common prioritisation principles ensures structure in demand management. The DMO's role is to provide data for the enforcement of these principles within the decision-making process. Prioritisation links initiative selection to strategic metrics. Proposals are prioritised based on common criteria rather than emotion, directing funds/resources to initiatives that correspond to the strategic direction. If necessary, initiatives that do not support the organisation's strategy are stopped. Prioritisation also balances risk in the entire portfolio.

5 Development Governance

For the development phase, the DMO ensures that the most suitable end-to-end flow is used, and that it is managed systematically with high quality and in accordance with the operating model. The DMO sets and follows up the practices for managing end-to-end development flows and provides support e.g., coaching or mentoring for end-to-end flows in the usage of these practices. Most of all, the DMO's role is to create and promote a positive and safe environment for sharing experiences and learnings to further develop these practices. There are three distinct development types:

Table 2 Characteristics of types of development

Sequential development (gate-based)	Incremental development with project model gates	Continual incremental development (sprint based)
"Traditional project"	*"Agile project or hybrid model"*	*"Full agile development"*
• Temporary project organisation • Clear beginning and end • Gate based stages • All project gates (if needed)	• Temporary project organisation • Clear beginning and end • Spring mode during implementation and deployment stages • Only portfolio gates • Agile practices in use	• Dedicated capacity • Set up for time being until strategic direction changes or product is discontinued • Continual sprint-based flow • Sprint based cadence with decision points • Agile practices in use

The Business Technology Standard has two extensions to help set up these practices:
- The **Gate-Based Project Management** extension is an adaptable project model suitable for traditional and agile project development.
- The **Sprint-Based Agile Development** extension describes all of the agile practices utilised in agile projects, including continual incremental development. In addition, it extends on the gate-based governance model describing how one can utilise different forms of agile within that same governance frame.

For decision-making related to development, again, the DMO provides concrete decision proposals for portfolio steering. To ensure uniformity in decision-making and offer support to those preparing to take an end-to-end development flow through a portfolio gate, the DMO can offer coaching and consultancy for preparing gate reviews. Gate decision criteria e.g., gate review check lists, are described in more detail in the Gate-Based Project Management extension.

Figure 9 *Supporting gate reviews*

The process is applicable to all development initiatives requiring a portfolio management gate decision, prior to each gate decision. Focus should be on the content of the gate decision proposal – not only whether the required data exists, and form is adhered to. The approach in the process is advising and coaching, if issues emerge, the DMO should support in solving them. The objective is also to ensure that only proposals that are mature enough can advance to decision-making, provide a common way of working, and transparency into the process.

In addition to these practices, the DMO assures quality of managing development end-to-end flows by setting and following up the practices for assessing the flows.
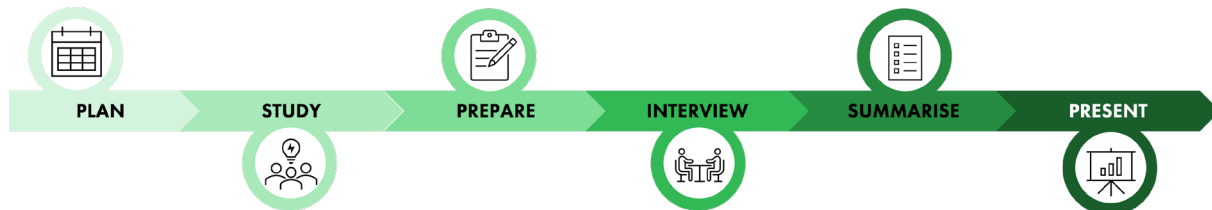

Figure 10 *Development initiative assessment checklist*

The DMO assesses the development initiatives as decided by portfolio steering. This might be assessing only critical initiatives or all initiatives periodically. The decision should be made based on assumed risk and portfolio size.

The goal of these assessments is to assure quality in the end-to-end flows. The approach should be more coaching and consulting, rather than auditing. Dialogue should be open and supportive, and process should provide concrete improvement recommendations for all parties. Another key target of the process is to provide transparency to the portfolio.

6   Resource Management

Resource management on the portfolio level focuses on securing resourcing for the whole development portfolio and giving an outlook on the future resource needs. Portfolio management is responsible for supporting development initiatives to resolve resourcing conflicts between them. The DMO sets frames for resource management practices and competence building within the development. The DMO also facilitates and, if necessary, offers tools for development resource management.
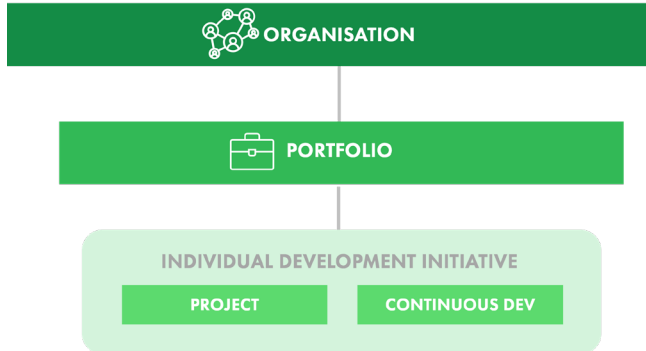

Figure 11 *Levels of resource management*

The organisation level sets frames for common resource management practices and organisation-wide competence building. The organisation's management team and HR are key functions related to this level. They secure the required capabilities that the organisation needs meet targets, steer and facilitate overall resource management. This sets a solid base and support for managing development resources.

Portfolio management sets frames for resource management practices and competence building within development. The key functions and roles involved are the DMO, Team Managers / Resource Owners, portfolio / value stream steering group and HR. In cooperation, they ensure that development has the needed capabilities to meet development targets. The DMO steers and facilitates the resource management of development and sets a solid base and support for managing the resources of projects and agile development.
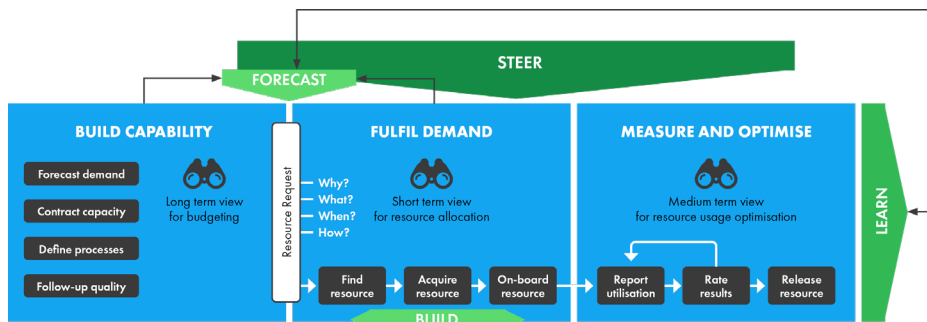

Figure 12 *Resource Management Process for DMO*

Resource management in projects is based on the individuals allocated to a certain role(s) in the project with agreed allocation of time, budget, and tasks. Resource owners are responsible for allocating the right individuals to the roles as requested. An allocated person can carry one or several roles in the project. The resource owner is responsible for ensuring that the resource management policies are followed up. Portfolio management is responsible for prioritising resourcing between projects and other development initiatives and supporting projects in acquiring needed resources. The project manager is responsible for estimating resource needs from the points of view of the role, competence, volume, and schedule. The resource needs should be estimated with the support of subject matter experts. The project manager is also responsible for building the project organisation and seeing that it is working.

The resource management of continuous development relies on fixed cross-functional teams, pre-existing or built for the development. The Business Owner/PO together with Resource Owners and development teams, estimate how many development teams and which skill sets are needed to meet the development initiative targets. The core of agile development is teamwork; therefore, it is not only a question about filling the volume and competence requirements of the team, but also focusing on team dynamics and how individuals match each other. Portfolio management is responsible for prioritising resourcing between development initiatives and supporting the development initiative to get the needed resources. The Scrum master(s) is responsible for enabling the team(s) to work as efficiently as possible.

Rules of thumb for resource management include:
- 100 % allocation to a project means, in practise, 80-90% availability for doing project related work.
- To ensure optimal throughput, only reserve 70-80% allocation of the whole development capacity at any given time and leave rest as a reserve for surprising situations.
- The optimal size of a high performing team is 5-7 people.
- Project members shouldn't have 20% or less allocation as it doesn't provide any meaningful output.

7   Business Case Follow-up

Business value should guide leadership of projects and continuous agile development. Creating business cases for projects and epics in continuous development accomplishes this. The DMO sets practices for following up business cases and value, facilitates, and if necessary, offers tools for this. The DMO or BTPO can provide guidance and tools on how to set up business value realisation measurement. The DMO can also collect all the measurements and report the created value to the leadership team.

The business case defines the balance between the costs and the business benefits. It estimates the surplus of benefits over the costs (return on investment), the payback time (break-even point) and gives the internal interest rate for the investment based on the associated risk. Business cases should also contain business objectives translated into mea-surable KPIs for any initiative. These KPIs are unique for every organisation and development initiative as they should reflect the strategic goals of the organisation. All development should align with these goals and strive to achieve them.

Business value starts to realise in different timeframes for sequential and incremental development. For sequential de-velopments, some of the business benefits may be achieved before the rollout happens, e.g., during the pilot, in most cases though, benefits materialise after the rollout. Therefore, the project team cannot be responsible for business val-ue measurement, but it is ultimately the responsibility of Business Owners / Product Owners, supported by the DMO. For incremental developments however, the business value realisation must be measured from the first increment. The

DMO's role is to provide tools and guidance for business value realisation for both types of end-to-end flows. Business value realisation relies on the business case formulated in the demand phase. Certain business value realisation tasks can be overseen by the DMO, in cooperation with the Business Owner, after the end-to-end flows have been closed.
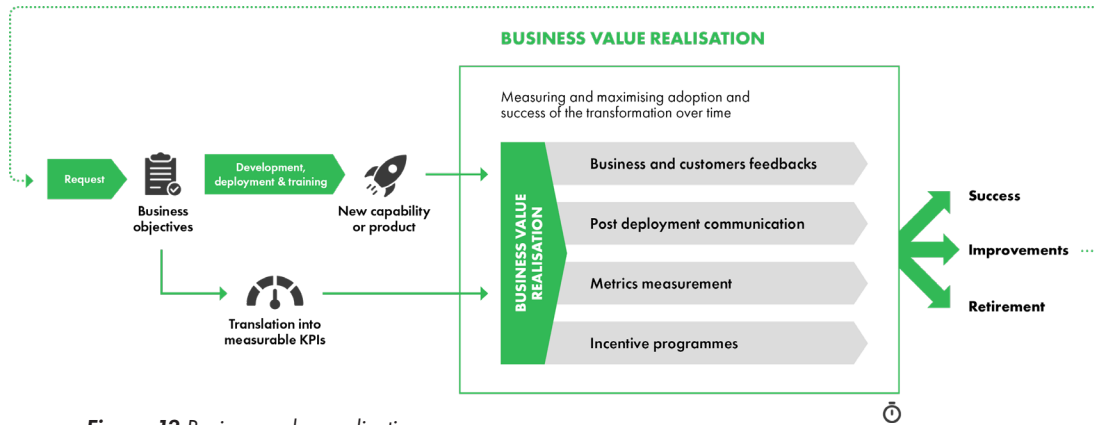

Figure 13 *Business value realisation*

Business and portfolio steering set up business goals and value targets. Ultimately, the responsibility lies with the business and Business Owner. The Business Owner refines the KPIs related to business objectives and ensures that measurement is executed in a timely fashion. The Business Owner is also responsible for taking any measures needed to ensure that organisation is ready for the change and the expected value can be realised.

The DMO, on the other hand, sets practices for business case and value follow up, facilitates and offers tools for this as necessary. The DMO or BTPO can provide guidance and tools on how to set up business value realisation measurement. The DMO can also collect all the measurements and report the created value to the leadership team.
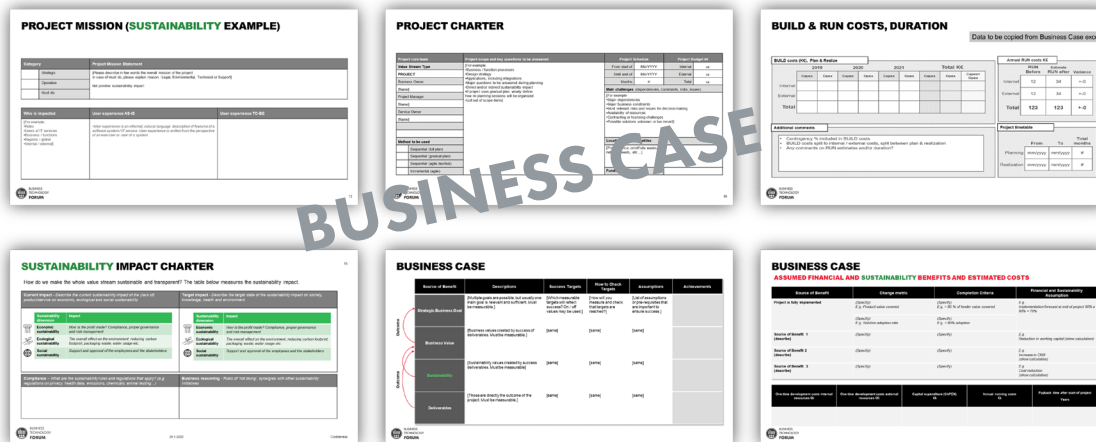
Who We Are

The Business Technology Forum (or BT Forum) is a non-profit professional organisation consisting of a community of forerunner companies, and public organisations collaborating according to platform economy model.

The BT Forum provides business and technology leaders with an open-source technology management framework called the Business Technology Standard. The BT Standard consists of best practices, models and tools developed together with the BT Forum community in order to plan, build and run information technology in today's technology-driven business world.

The BT Forum coordinates the development work within the community members and publishes an upgraded version of the BT Standard twice a year. In addition the BT Forum also organises events and conferences, publishes educational materials and offers training courses to advance the business technology management profession.

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