thinking
portfolio®

Risk Management Portfolio

Thinking Portfolio® White Paper

A platform for the strategic management of your risk portfolio
Gain an up-to-date view of the current risk situation – all in one place
Manage risk discovery, risk analysis and mitigating actions
Keep your risks in one portfolio

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White Paper
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Risk Management Portfolio

– A platform for the strategic management of your risk portfolio

Thinking Portfolio® is a practical platform for risk management. Keep your risks in one portfolio to manage risk discovery, risk analysis and mitigating actions. Gain an up-to-date view of the current risk situation – all in one place.

A platform for Risk Management may be needed when:

- A change in business environment requires continuous risk analysis.

- Making informed decisions and prioritisation require up-to-date risk information.

- Governance and paper trail are demanded by the stakeholders and officials, e.g. auditors.

- Numerous risk mitigation actions must be recorded and followed.

- Common procedures in risk management are required to gain effectiveness, efficiency and quality.

- Employees need to be empowered or a decentralised process needs guidelines.

- The lifecycle of the risks and risk process need to be managed.

- Improved information and document management is required for risk management.

- Reporting on risk management is necessary for the stakeholders.

The Thinking Portfolio Risk Portfolio is intended to be used by many types of users. Users may include:

- All organisation stakeholders who may be appointed and discover new risks and analysis – evaluation may be even crowd-sourced. The Thinking Portfolio platform does not limit the number of users or have extra fees per user.

- The Risk Manager or Risk Editor who is responsible for reporting risks. Risk management may be de-centralised to risk managers, but the common tools and practices make the process more aligned and the results may be analysed on a portfolio level.

- The Risk Owner, who may be responsible for proper risk analysis and management and usually makes the decisions on risk acceptance, tolerance and mitigation actions.

- Risk Process Owners and Administrative Users are the janitors of the platform at the user organisation. They may not have a role in managing risks but may cover the risk management process. They can make changes on the platform as the organisation and the business environment evolve.

Thinking Portfolio

Platform's Background in Strategic Project Portfolio Management

Thinking Portfolio® was originally built to be a practical tool for strategic project portfolio management. The portfolio management model supports business-driven planning and decision-making.

The starting points for the development were project work and international frameworks for portfolio management such as PRINCE2, PMBOK and SAFe 4.6.

An organisation that implements Thinking Portfolio for any portfolio management purpose is well-equipped for fast decision-making, agile change, risk management and the strategic understanding of the big picture at all organisational levels.

Thinking Portfolio's straightforward visual presentation method and browser-based user interface speeds up its adoption. The use of the system requires no special training or manuals.

Thinking Portfolio has been developed by utilising the latest Web technologies. The browser interface works with the latest versions of MS Edge, Firefox, Chrome and Safari, and with leading tablets.

The technical solution supports the implementation of any portfolio management methodologies. The portfolio application presented here is a strategic level management tool for Risk Management. Other customer implementations of Thinking Portfolio include Service Management, Application Management, Idea Management, Supplier Management, Asset Management, New Product Design and many more.

Why Portfolio Management?

Transparency to management

Boost the efficiency of advance planning

A tool for risk management

The Main View of Your Risk Portfolio

— The Main View presents an overview of the whole Risk Portfolio

In our approach, the most valuable Risk Management information is gathered for the user organisation to facilitate quick decision-making and follow-up.

The Portfolio view (Figure 2) gives an overview of the Risk Portfolio and presents the selected risk information. Color-coded fields indicate the risk's severity and status at a glance.

The header row helps to arrange and filter the portfolio according to selected criteria. For example, risks can be organised by severity with a single click.

Figure 3. The Main Portfolio View

Risk Management Reference Model
– The common practices the organisations use to manage risks

In the Thinking Portfolio approach, we organise the platform to support the practices of the user organisation. With Thinking Portfolio, the user organisation can reinforce their chosen practices, methods and procedures.
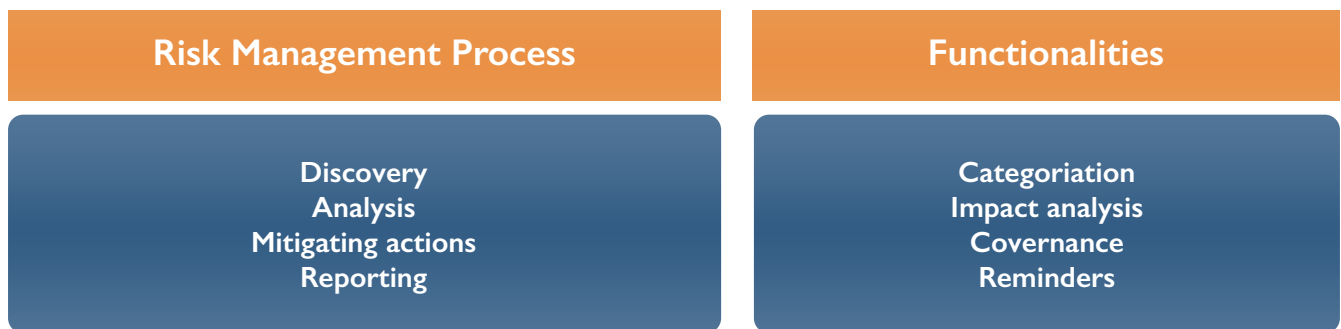
Risk Management Process	Functionalities
Discovery Analysis Mitigating actions Reporting	Categoriation Impact analysis Covernance Reminders

Figure 4. Thinking Portfolio's Risk Management Reference Model

The starting points for the development of the Risk Management Reference Model were international frameworks for Risk Management such as COSO Enterprise Risk Management 2017 and ISO 31000:2018 Risk Management.

In Thinking Portfolio's Risk Management Reference Model, there is a process as well as functionalities typically used in Risk Management (Figure 4). The included functionalities are innovated with our customers and used by organisations with different needs. The platform is customised as the customer desires using the Reference Model as a baseline and chosen functionalities as building blocks.

- The Risk Management Process or cycle is typically set up according to user organisation practices. The process may include a schedule for reviewing risks and/or a process for keeping the risk portfolio up-to-date.

- Risk discovery is typically a task that risk management needs to organise. The risk discovery may be organised, for example, by process or tools that aim to discover risk prospects. Risk discovery may also be initiated by events, such as a new project or new investment that needs to be evaluated from a risk point of view.

- Risk analysis is typically a task for risk management. A simple risk analysis may be a combination of categorisation and risk impact analysis. Risk analysis is highly dependent of organisation and may be developed according to the needs of the customer.

- Mitigation Actions are recorded in the system and

may be used flexibly to gain momentum, control and accountability. A roadmap or a gantt-chart may give a holistic view of the organisation's risk management efforts.

- Reporting includes basic risk reports for individual risks as well as portfolio reports to gain a holistic view. Various templates and graphs can be used to develop reports according to the user organisation's specific needs.

The common Risk Management functionalities included in the Thinking Portfolio platform include:

- Risk Categorisation, which includes dimensions most important to the user organisation's environment. The risk categories are analysed with the components most appropriate for the user organisation's needs. The needs and requirements are usually based on how the risk portfolio is communicated to stakeholders.

- Risk impact analysis can be done in multiple ways, from simple scoring to more comprehensive financial and statistical analysis. Various templates and tools can be used to develop analysis according to the user organisation's specific needs.

- Governance includes follow-up and paper-trail, and ex-post evaluation can be managed in the Risk Management Portfolio. For example, changes in risk analysis and decisions based on analysis may be recorded. The platform can be extended to risk lifecycle management and integrated to business processes.

Approval Process

Figure 5. *Simple Risk Approval Process*

Risk Management Process in portfolio

The risk management process may include several levels of integrated processes or cycles. Processes or cycles may include:

- Top management and board level review and approval
- Business or unit level review and approval
- Cross functional (e.g. Finance or EHSQ1) review and approval
- Individual risk review and approval
- Individual mitigating action review and approval

The processes may be scheduled around the calendar or awoken by an external event or an event in the process.

Top management review is frequently scheduled and aligned according to the strategy process or fiscal reporting. In Thinking Portfolio, these types of processes or cycles may be integrated and modelled in the tool. The reports as well as reminders may be used to manage the process according to the planned process.

An individual risk review may, for example, be scheduled so that risks are reviewed regularly to allow certain decision-making to take place.

Individual risk reviews may also be event based: whenever there is change in the environment, the risk is analysed and the Thinking Portfolio platform drives the process to review the change. This way, the whole risk portfolio is always up-to-date. Figure 5 illustrates an example of a simple risk approval process.

Risk Analysis

The power of common simple analysis becomes apparent when analysing the information over the whole portfolio.

The simple risks widget (Figure 6) facilitates a quick analysis of the risks. Risk analysis may be filled with a simple drop-down menu (Figure 7). The dimensions may be designed so that they can be changed by the administrative users of the organisation.

The Risk Score can be calculated, for example, with a simple multiplication of probability and severity (Figure 7). The user interface may include pictures as tooltips. For example, here is a simple 5x5 matrix (Figure 8).

Thinking Portfolio offers a flexible and easily modifiable management of risk mitigation actions (Figure 9). Individual tasks may have descriptions, owners, statuses or almost any other information requested. If risk mitigation actions need to be prioritised, there are tools to make priorisation based on criteria.

Figure 6. Simple Risk Impact Analysis

Figure 7. Risk Severity dropdown

Figure 8. Simple Risk Matrix

Figure 9. Mitigating actions

Risk Management Functionalities

— The Risk Management tools to support the organisation's practices

We bring our expertise in digitalising desired practices to your Risk Management platform.

Thinking Portfolio tools are mostly used to manage the portfolio and the big picture. In efficient portfolio management, up-to-date data needs to be collected from all individual risk managers. The Thinking Portfolio's Risk Management Reference Model is a quick way to start building a platform that supports the collecting of the information for Risk Portfolio management purposes. At the operational level, the platform's functionalities can be used to maintain the overview of the risk management status and assist the people involved in risk management.

Thinking Portfolio's building blocks are called widgets. Currently, there are dozens of widget designs in our library. The following are a few examples of the most frequently used in risk management.

Risk categorisation

The risks in portfolio are usually organised or categorised in relation to the strategic objectives defined by the organisation.

Thinking Portfolio's risk categorisation widgets are tools to align risk management according to, for example, strategy or process (Figure 10 and Figure 11). This area is highly dependent on the user organisation's environment, and the solution is defined with the customer. Possible dimensions may include:

- Strategic objectives
- Business lines or areas
- Process
- Products
- Services
- Customers
- Etc

The Risk Portfolio may be created hierarchically. For example, sub-risks may be placed under a strategic risk. Another example is that same risk (e.g. health & safety) may be evaluated individually by all business areas.

Governance

The user organisation may use the risk portfolio platform to strengthen its governance. Roles, authorities and responsibilities may be aligned in the system and automatically reinforced.

Thinking Portfolio includes multiple ways to work with documents to keep them organised and available. Almost any type of information can be included on the platform. It is possible to integrate risk management documentation in the platform either by attached documents or by linking to other systems and data (Figure 12). The diaries and templates are available for following analysis efforts, development and decisions.

Paper trail

On the Thinking Portfolio platform, logging can be done with tracker-functionality. The Tracker makes a log of selected data and records the change that has happened and who has made the change.

A snapshot is a record of all the data of a portfolio at a given moment. Administrative users can save and manage snapshots on the Management menu. When a snapshot is activated, the user sees the portfolio as it was in the moment of the snapshot. Auto-snapshots record the selected data or data analysis automatically into the log. When there are snapshots or auto-snapshots available, the trend reports can be created from the data.

The check-lists can be used to ensure efficiency and compliance.

Risk Impact Analysis

The risks impact analysis is done to get a better understanding of risks and to gain a better understanding of the risk portfolio. The information may be used to steer business decisions and manage risk mitigating actions.

Thinking Portfolio has an ever growing set of risk analysis tools that are further developed in co-operation with the customers. The tools may be used for a quick as well as more comprehensive analysis of the risks. Analysis may be aligned with organisations' core processes and functions in order to avoid unnecessary paperwork.

With a more detailed business and finance risk analysis (Figure 12), the organisation may prepare more sophisticated analysis on expected business results. In sophisticated financial and business analysis, an expected value of the risk may be calculated and Value-at-risk analysis may be prepared. Taking risk may be weighted against expected opportunities and/or gains.

There are several risk analysis widgets that may be used as a baseline for customised risk analysis, for example in Figure 12 and Figure 13. There is a possibility to use fully customised comprehensive forms and check-lists to ensure preciseness, efficiency and compliance.

Up-to-date and comprehensive information is usually a requirement for a risk management system. On the platform, the risk management process may be kept up-to-date with help of timely reminders (Figure 17). A reminder is sent on predefined events to the receiver, accompanied by the actions the receiver must perform.

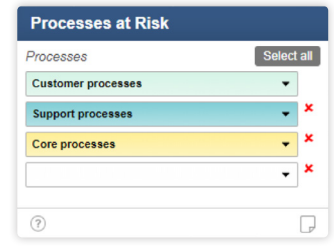*Figure 10. Strategic Objectives at Risk*

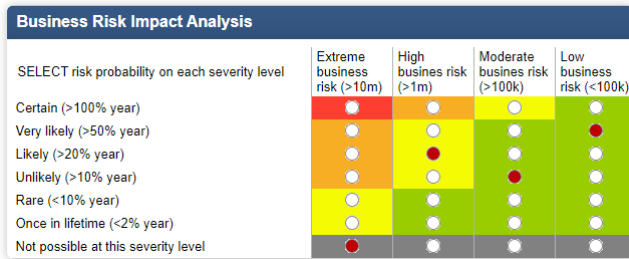*Figure 11. Processes at Risk*

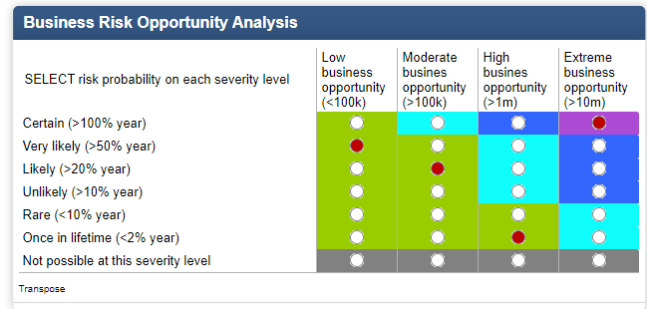

Figure 12. Business Risk Impact Analysis

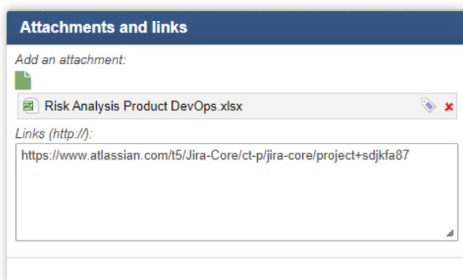*Figure 13. Business Risk Opportunity Analysis*
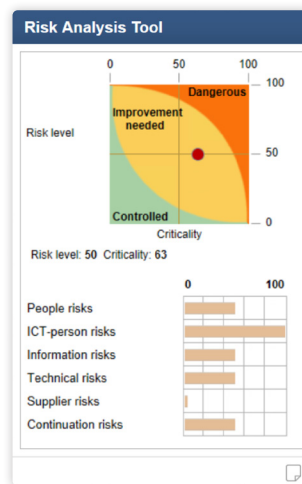

Figure 14. Attachments and links
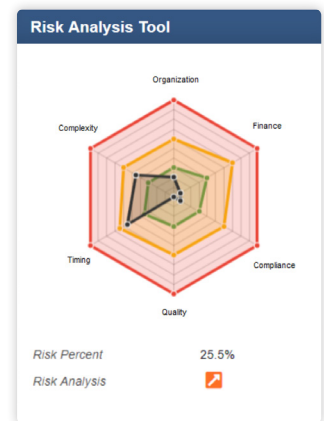

Figure 15. Attachments and links

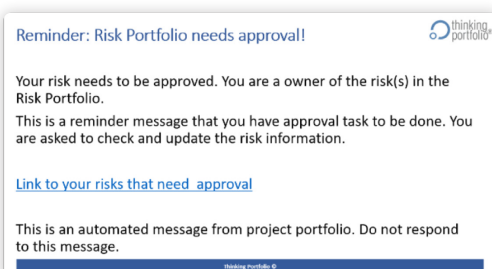*Figure 16. Attachments and links*

Figure 17. Attachments and links

Reporting
— Views to the portfolio for communication, documentation, analysis

Thinking Portfolio's reports crystallise the situation and outlook for the executive management. The views and presentation methods of reports depend on their functional purpose and may be customised to the user organisation's needs.

In portfolio view, the user can filter the risk portfolio according to several simultaneous criteria. The filters remain effective when the user wants to see the risks on other views or reports. The filters can be saved for later use and also shared among users.

The dashboards and pivot reports may be used to generate new analyses and presentations of the information. Visual tools and reports of Thinking Portfolio can be used by themselves as presentation material.

For example, the Full Pager report can facilitate slideshows of any information and report included in the tool. The links and documents can be attached into the tool next to the task at hand to keep information organised and available.

A so-called Risk Charter is generated automatically for every risk, containing in a single report all the information entered on the platform.

Examples of other possible reports used in risk portfolio management are:

- Risk analysis and risk portfolio from various dimensions
- How risks are concentrated and related to strategy, businesses, processes, projects, products, customers etc.
- Relations and dependencies of risks and other areas important to the organisation
- Ongoing mitigation actions and opportunities
- Development of risks in time
- Dashboard introduces a personalised view for the most important reports on impact on focus areas (Figure 18). It allows reports to be generated for different needs. For example, a manager could create a specified view for the control group and project team

Dashboards

Dashboard introduces a personalised view for the most important reports on impact on focus areas (Figure 18). It allows reports to be generated for different needs. For example, a manager could create a specified view for the control group and project team.

Risk Heatmap Report

The Risk Heatmap Report (Risk Matrix) (Figure 19) illustrates the versatile graphical reporting possibilities that can be included in our Risk Management reference portfolio. With colours, sizes, locations and info boxes, it is possible to illustrate various information in portfolio.

A more detailed risk analysis map (Figure 20) may be used to highlight more detailed analysis information.

Risk Dependency Map

Risk dependencies (Figure 21) visualise the portfolio's relations between selected items. Such dependencies might include how one risk is dependent on the other risk or how activities are affecting different risks, etc.

Pivot Report

The pivot report is a table or graph in which the values are presented and calculated based on user selections (Figure 22). The layout of the pivot report can be easily modified by the user to match the need at hand. The modified report may be saved as a new report and shared with other users.

The pivot report may be configured as a graph that is versatile in displaying information and editing, in which the values are presented and calculated based on user selections (Figure 23). The layout of the pivot report can be easily modified by the user to match the need at hand. The modified report may be saved as a new report and shared with other users.
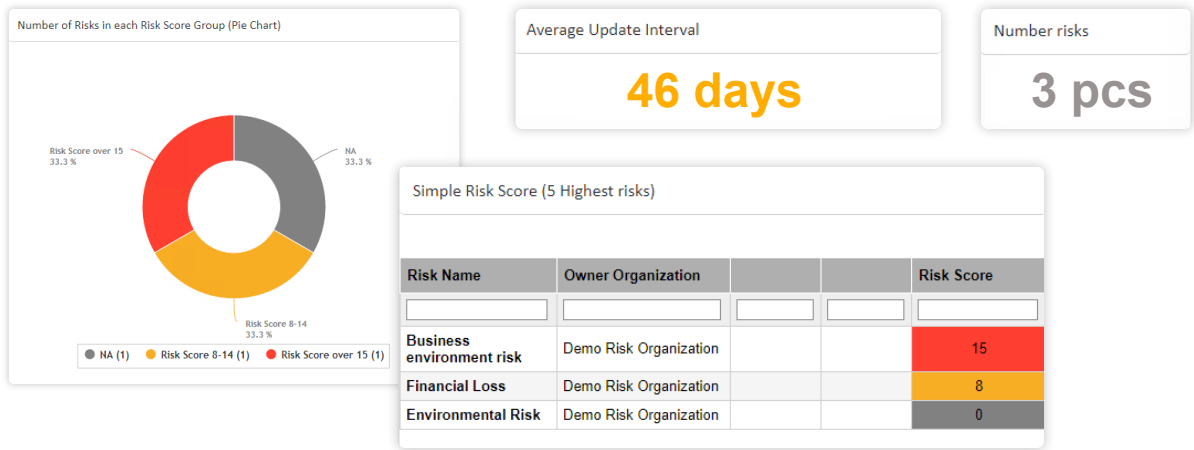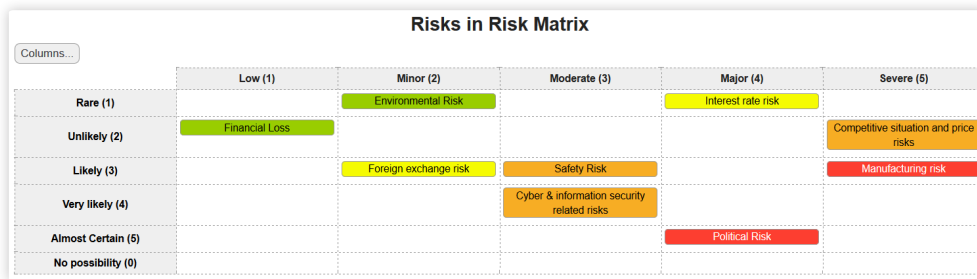
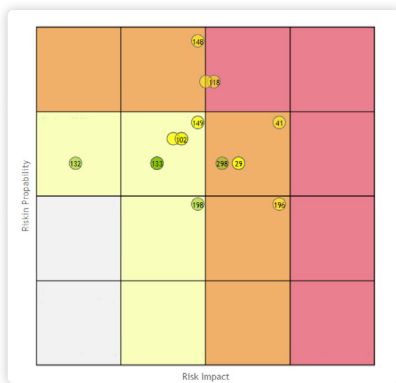Figure 18. Dashboard View

Figure 19. The Risk Heatmap Report

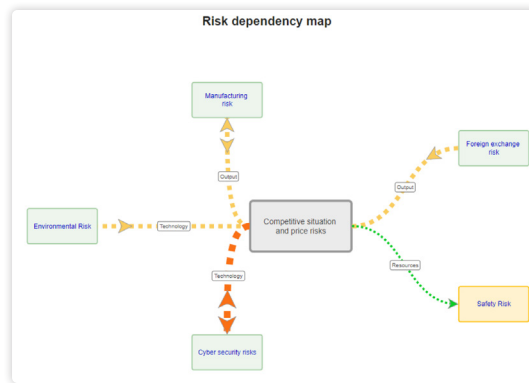Figure 20. Detailed risk analysis map
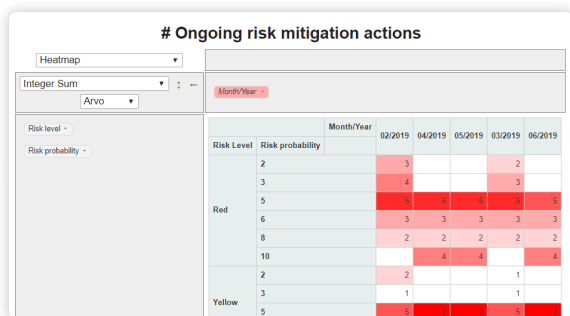

Figure 21. Risk Dependency Map
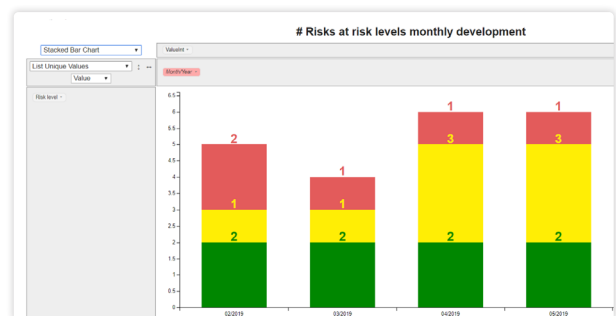

Figure 22. Pivot Report

Figure 23. Pivot report as a graph

Other Risk Portfolio Management Tools

The Thinking Portfolio platform includes portfolio management tools that extend the common Risk Management functionalities.

Risk and Action Templates

Risk may be created as templates and copied as new risks. This is useful, for example, when there is a need to analyse similar risks in many instances, for example, in business lines, branch offices, products or services. Mitigating action templates may be used as a set of best practices of risk mitigation. Action templates may not be the solution for all cases, but they may serve as a reminder of some common risk management actions and act as a starting point to set more dedicated controls for the case.

Integration to business processes

Integration to business processes may transform risk management from supporting task to integrated part of business. For example, integrating business system information to the risk management system may be used to create a process for risk related activities. Such activities may include learning from near misses or risk events.

Document Templates

Document Templates are document files that can be opened in the portfolio tool for local editing. These may include evaluation and analysis templates, documentation, meeting notes and decisions.

Figure 24. Commenting of Risks

Figure 25. GANTT charts

User Interface Based on Risk Type

Different types of risks may have different templates and tools suitable for them (e.g. R&D or IT-development). The widgets on the platform can be changed accordingly.

Log / Diary

The Log Widget is a simple way to record Risk Management history, such as the decisions made in meetings, in a memo-like format (Figure 6). The product development Log may contain desired information about development, for example, the status, notes, tracking data, other widgets and links to intranet pages or project documents.

Collaboration and commenting

Efficient risk management is a collaborative effort. Thinking Portfolio adds a new collaboration channel for the risk talk. Risk may be collaboratively edited and analysed. For example, the simple commenting of risks is an available option (Figure 24). This can be used to pass important information to responsible persons or track information on the latest changes in an environment. There is also the possibility for voting whereby multiple users may, for example, cast their votes or opinions on how risk should be evaluated.

Roadmap and gant chart for mitigation actions

Sometimes, the management of mitigation actions may require more task and project management tools. A graphical presentation is an efficient tool to manage and communicate mitigating actions. Thinking Portfolio supports such diagrams, e.g. GANTT charts, to visualise tasks and milestones (Figure 25). Reports make the communicating status of actions easy and visual.

At the portfolio level, the roadmap report (Figure 26) is a composition in which all risk timelines and mitigation actions may be seen over the whole portfolio. The roadmap may include mitigation actions and key milestones, as well as periods in which risks are present or active.
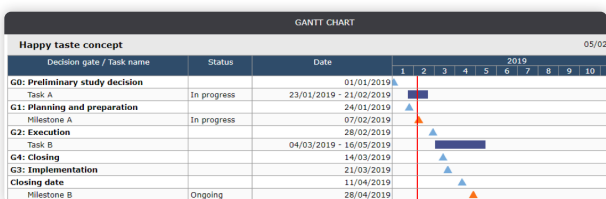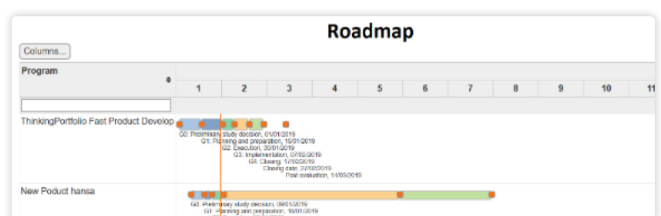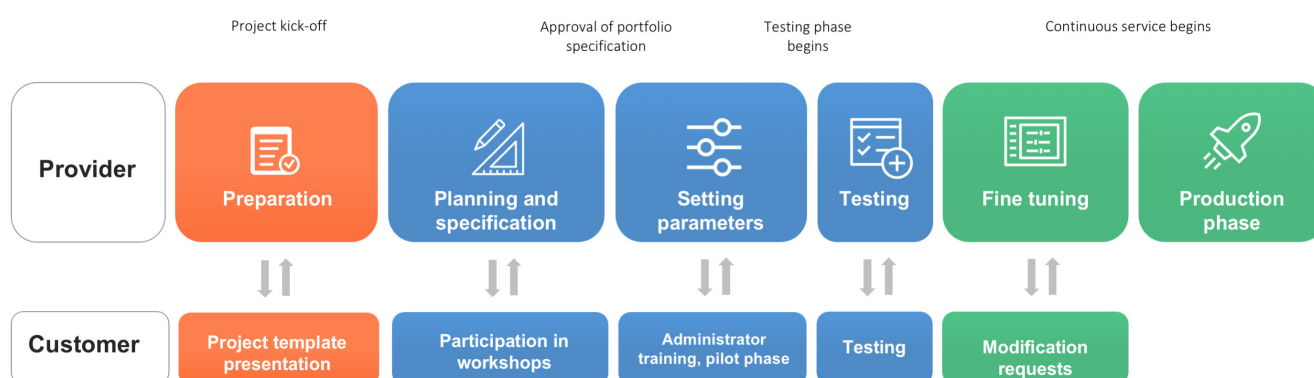

Figure 26. Roadmap report

Implementation and Use of Thinking Portfolio

We recommend the implementation of our fast Proof of Concept project (PoC) with the customer. After a few meetings, we will customer-specifically implement an application that can be accessed from our server for a trial period of one to three months.

	Project kick-off	Approval of portfolio specification	Testing phase begins	Continuous service begins

Provider: Preparation | Planning and specification | Setting parameters | Testing | Fine tuning | Production phase

Customer: Project template presentation | Participation in workshops | Administrator training, pilot phase | Testing | Modification requests

Implementation

Implementation is done in stages. The planning usually includes three workshops to capture the customer needs and specification. Thinking Portfolio's consultants parametrise these needs into the tool. At the latest, the customer can look at and view the platform in the testing stage. Usually, implementation is done iteratively so that more is built on an agreed foundation. Fine tuning is done to perfect the platform to the customer needs.

Customisation

Thinking Portfolio is almost always to some degree customised to meet the customer's needs in Risk Management process and Risk Portfolio management. The user interface is currently available in English and Finnish but can also be translated to other languages.

After the implementation, customers can modify the platform to meet the organisational and conceptual changes that the organisation faces over time. The customers' changing environment and the most likely changes are considered when the tool is implemented.

Different Portfolio Reference Models

Thinking portfolio has a range of reference models called Portfolio Landscape. Thinking Portfolio's basic components – the widgets – are the building blocks for constructing various portfolio models. The widgets' content can be parametrised according to the customer's needs. The Thinking Portfolio platform has been designed for maximum flexibility; customer-specific customisation requires no structural modifications in the database and software.

Support Service

The service model includes telephone and e-mail support for the customer's administrative user. We have a monthly service agreement model for customers that want flexibility in making changes in the platform.

Consulting services

Sometimes, setting up a portfolio feels like a big hurdle and planning the roll-out can seem a huge step. We offer custom designed services for your detailed process review and development, portfolio and roll-out planning, to ensure a smooth launch for your platform supported process.

APPENDIX 1 Strategic Portfolio Management

– Ideas, projects, and assets

Thinking Portfolio's reports crystallize the situation and outlook for the executive management. The reports' view and presentation method depend on their functional purpose and may be customized to the user organization's needs.

Manage strategically   Manage the totality   Evaluate using consistent criteria

Figure 1. Project portfolio management principles

The use of portfolios as a management tool is growing in popularity. Its purpose is to bring consistency, efficiency and transparency to management and decision-making.

The management of wide-ranging and multifaceted organisations is often complicated by the discrepancies between customer demands and expectations, challenges with the flow of information and a shortage of skilled professionals. This results in projects overlapping and competing for the same resources whose timing or content may not have been optimised – the link between practical execution and the core business strategy is often unclear.

Portfolio management is an operating model that attempts to address the problems associated with fast-paced and multidimensional management. It creates operational prerequisites that, at their best, boost efficiency in planning, decision-making and implementation (Figure 1).

Portfolios are a specific method for pinpointing the assets, resources and projects that will enable an organisation to successfully implement its strategy. The risks and opportunities are something that may threat the organisation or make them succeed in the future. There are three main types of management portfolios (Figure 2):

- The Development Portfolio contains descriptions of the development opportunities, proposals, ideas and scenarios as well as risks aimed at the organisation's future.

- The Project Portfolio contains projects and their sub-projects that are planned, underway or completed.

- The Asset or Resource Portfolio contains, for example, applications, skills or processes that the organisation has obtained for its use through development projects and investments.

The portfolios should always be interconnected; project proposals from the Development Portfolio are imported to the Project Portfolio. The Project Portfolio generates an asset as an output. Risks and opportunities may be integrated and present in every major undertaking. Risk mitigation and actions may be integrated to projects. Diminished property assets or poor performance generate development needs, and so forth.

Our approach is to create a precise tool for the most valuable operations for each user organisation. The tool should be as easy to use as possible, but at the same time include the most valuable features and help where digitalisation is most needed.
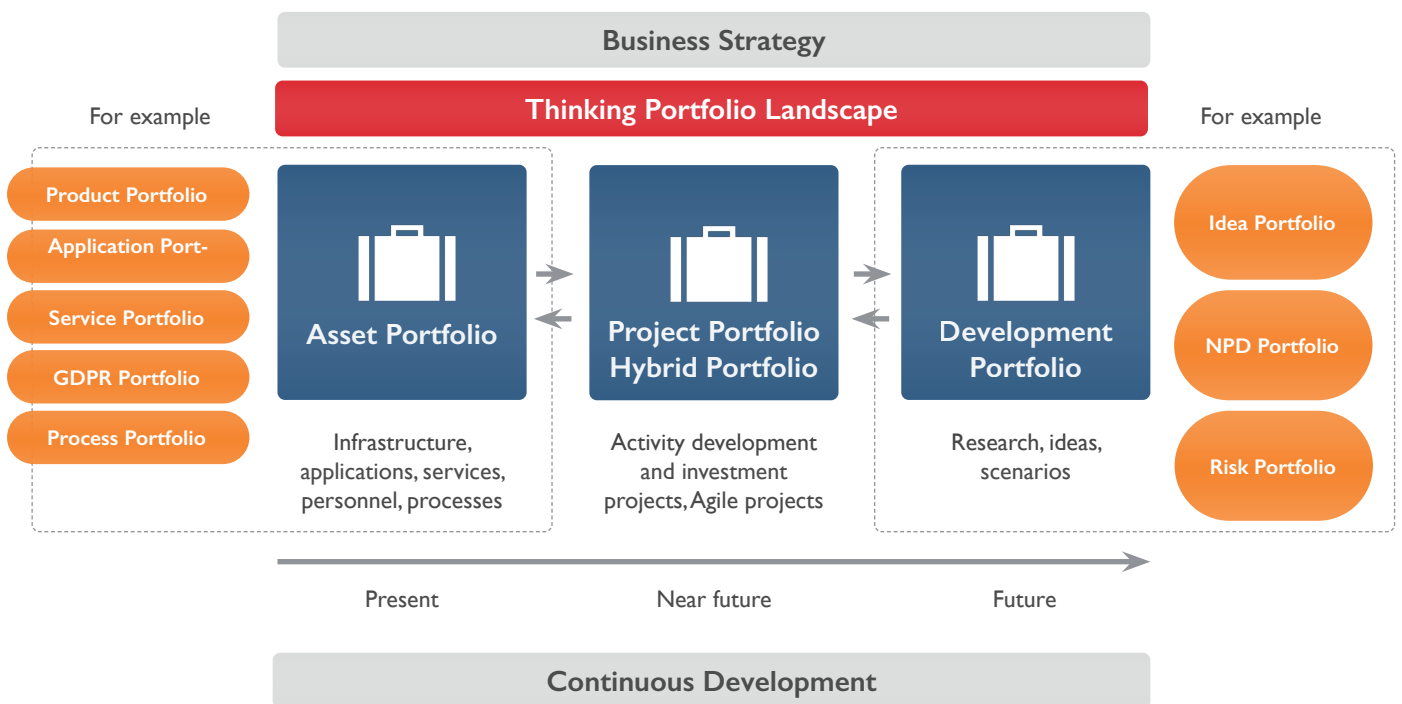
Figure 2. The strategic portfolios

The management principle

At its simplest, portfolio management is a question of managing and balancing earnings, investments and risks. Earnings can be, for example, cost savings, a growth in productivity, the acquisition of new custom or increased net sales. Investments also include the use of time and money; these include project work, training, start-up and maintenance.

There are many project risks but also risks related to existing property, for example, the scalability of an ICT application or system in the growth or contraction of business operations.

Portfolios' connection to strategy and architecture

The portfolios are intermeshed through the organisation's strategic criteria and classifications. Senior management defines the strategy's success factors and key results which are then described in the portfolios as separate criteria that can be used to evaluate an idea, a project or an application strategically. An increasing number of organisations also plan and measure impact – impact of the developed output after the implementation of planned changes.

Within the portfolios, it is essential to identify the equivalency between a project or property and its business, information, application and technology architecture. For example, a certain new custom information system could adequately support an organisation's strategy, but it might be incompatible with current application and technology architecture.

Success factors

The adoption of portfolio management can be a project, but its integration as part of an organisation's daily operations requires focused commitment and an example to be set by management. Portfolio management must become a part of the organisation's leadership, for example, as part of the executive group's continuous work.

An organisation's level of maturity plays a significance role in whether portfolio management succeeds. If there are substantial deficiencies in leadership skills or project operations, portfolio management will remain without a basis. The portfolios will be worthless if an organisation lacks the ability to function according to its requirements.

Portfolio management requires tools for its support. Again, the tools are not the solution, but they will help support changes in new ways of thinking.

APPENDIX 2 Technical features

User interface

Thinking Portfolio is a completely browser-based application functioning with the latest versions of Edge, Chrome, Firefox and Safari, as well as with iPad browsers.

Usage

Usage and maintenance are managed over secure connections. Limiting the use to certain IP addresses is also possible.

User management

The specification of Thinking Portfolio's access control is role-based. With the Project Portfolio, the roles can be, for example, a member of the board of directors, a member of a steering group, project manager and so forth. The role nomenclature is determined specific to the customer.

The portfolio application has one or several administrators who have extended rights, for example, the right to establish new projects. An administrator can be designated for the entire application, or, for example, for the portfolio of a certain business area.

Project-specific work progress models describe each user's role and access to certain stages of a project. After logging into the system, the user can, depending on his or her designated project role, either browse, report, edit or approve the results of a project stage.

User identification

The application supports two different access control methods: Windows identification, and internal user ID and password identification.

In Windows identification, the system's user name is the same as in the ActiveDirectory. Traditional user identification can be used, for example, when the organisation's external users, e.g. suppliers, are accessing the application.

Federated Single-Sign-On

The new single-sign-on solution of Thinking Portfolio is based on Microsoft Active Directory Federation Services (ADFS 2.0). The solution supports both SAML 2.0- and WS Federation 2.0 -based authentication schemes. No custom software is required at the customer side and the solution works from any internet location.

Connections to external systems

The easiest integration from and to Thinking Portfolio are the URL addresses. In Thinking Portfolio, URL addresses can be added next to the input in desired positions and in this way, e.g. the documentation and other applications are always easily available. The URL addresses in written in the application's text area fields, for example on documents they are automatically changed into hyperlinks.

Thinking Portfolio generates links that can be copied to other documents and software for easy access.

Thinking Portfolio facilitates the construction of connections to external systems such as SAP, M-Files, Kronodoc, Reptronic, Sharepoint, Aditro and Efecte.

Office Integration

Thinking Portfolio enables MS Office documents to be opened from the portfolio, edited locally and saved back online. The service is based on Webdav technology.

Thinking Portfolio builds a Landscape of Portfolios.

Thinking Portfolio builds a comprehensive strategic overview across portfolios for your top management's agenda. Your organisation's development portfolios may span a spectrum of business areas or include separate portfolios for investments, organisational and product development projects. In all these cases, a corporate overview can be built to reflect top level management needs across portfolios.

SaaS platform

Thinking Portfolio provides a convenient hosting solution in cooperation with Cygate Oy. Our cloud services and all our data are in Finland. The customer does not have to install any application as part of their IT environment, and the most up-to-date version of the application is always available.

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