



# Risk Management Portfolio

Thinking Portfolio® Whitepaper

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



# Thinking Portfolio® Risk Management Portfolio Whitepaper

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# Thinking Portfolio

## Platform's Background in Strategic Project Portfolio Management

Thinking Portfolio® is a practical tool for strategic management. The portfolio management model supports business-driven planning and decision-making based on a firm overall grasp.

An organization implementing Thinking Portfolio® is well-equipped for fast decision-making, agile change management, enhanced business drivenness, and risk management.

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

Thinking Portfolio® has been developed by utilizing the latest Web technology. The browser-based user interface is intuitive and easy to use.

The technical solution facilitates the implementation of various portfolio management applications.

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.

## Benefits of Thinking Portfolio®



Sector independent

Improves management by  
information  
and decision making

Adapts to each  
organization's own  
operating methods

Over 40+ portfolio  
templates with  
built-in interconnectivity

Independent number of users  
– fixed price for an unlimited  
amount of users

Versatile, visual reporting -  
already over  
800 different report  
templates

Allows multiple  
simultaneous use of  
different language  
versions

Easy-to-use browser interface

Quickly  
to be implemented

# Strategic Portfolio Management

– Ideas, projects and assets

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

## Why Portfolio Management?

Enhances decision-making

Boost the efficiency of advance planning

A tool for risk management

The management of wide-ranging and multifaceted organizations is often complicated by the discrepancies between customer demands and expectations, problems 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 has not been optimized in any way; the link between practical execution and the core business strategy is often unclear.

Portfolio management is an operations model that attempts to alleviate the problems associated with fast-paced and multidimensional management. It creates operational prerequisites that at their best boost the efficiency of advance planning, decision-making, and implementation (Figure 1). Portfolio management consists of knowledge, processes and roles.

Portfolios are a specified way to pinpoint the resources and projects that will enable an organization to implement its strategy. There are three main types of management portfolios (Figure 2):

- ▶ **The Development Portfolio** contains descriptions of the development proposals, ideas, and scenarios (for example development programs) aiming at the organization'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 organization has obtained for its use through development projects and investments.

The portfolios are interconnected; project proposals from the Development Portfolio are imported to the Project Portfolio. The Project Portfolio generates an asset. Diminished property assets or poor performance generate development needs, and so forth.

## 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 organization's strategic criteria and classifications. Senior management defines the strategy's success factors and key results that are then described in the portfolios as separate criteria that are used to evaluate an idea, project, or application strategically.

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



Figure 1. Project portfolio management principles

## Success factors

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

An organization's level of maturity has significance if portfolio management is to succeed. 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 organization lacks the ability to function according to their requirements.

Portfolio management requires tools for its support. Here as well, the tools are not the solution, but they support changes in ways of thinking.

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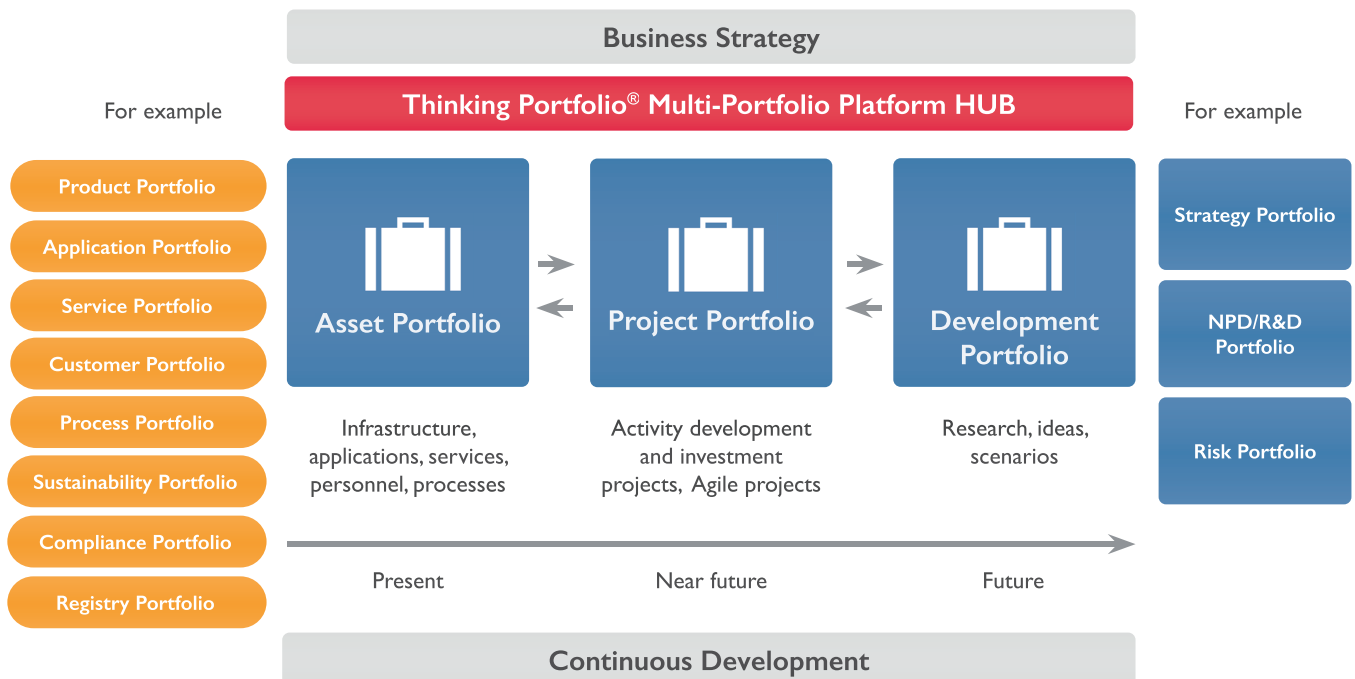
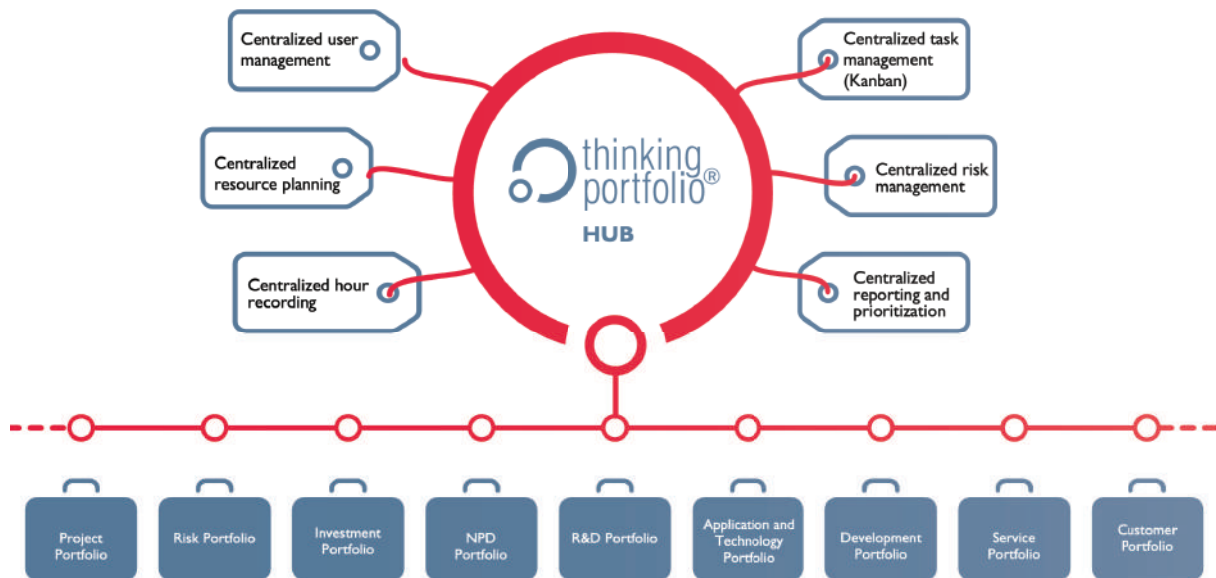


Figure 2. Strategic Portfolios

# Thinking Portfolio® HUB

– centralised resource management, resource planning and task management



## Benefits of Multi-Portfolio Platform HUB

### Makes the implementation of several portfolios more efficient

- ▶ One database, the connection of the information model of several portfolios to each other
- ▶ Makes use of elements already in use such as user management

### Versatile reporting possibilities

- ▶ Enables reporting across portfolio boundaries
- ▶ Produces a more in-depth picture of the situation

### More versatile user management

- ▶ Description of abilities
- ▶ Workload
- ▶ Resourcing
- ▶ Description of competence

### Resource planning, approval of resourcing

- ▶ Total resourcing for all portfolios
- ▶ Transparency of resourcing
- ▶ Possibility to reserve time for line work
- ▶ Hourly records in one place for all portfolios

### Connected risk

### management between portfolios

- ▶ Risk analysis of different portfolios
- ▶ Review of risks across portfolio boundaries

### User management of different portfolios for the main user

- ▶ Enhances the management of access rights
- ▶ The end user has the opportunity to complete his own information

### Task management brings efficiency to monitoring

- ▶ Better transparency for the user to defined tasks across portfolio boundaries



## Multi-Portfolio Platform HUB

Thinking Portfolio's new HUB platform allows for even closer interconnection of the data models of multiple portfolios. At the core of Thinking Portfolio's Landscape HUB, implemented with the help of the HRD portfolio, there is centralised user management, which can be parameterised in a considerably more versatile manner than before. The deployment and use of new portfolios will be more efficient as well. Thinking Portfolio Landscape HUB offers the following benefits:

- ▶ Makes the user's competence transparent
- ▶ Centralised and simple user management for multiple different portfolios
- ▶ Centralised and easy visibility to resource management across different portfolios
- ▶ Support for the development discussion process
- ▶ Easier management of list values
- ▶ Overall resourcing for all portfolios (projects, absences, holidays)
- ▶ E.g., a centralised Kanban dashboard, where tasks are placed from different available portfolios
- ▶ Language selection, e.g. Finnish, English, Swedish, German, Dutch

The HUB entity contains then the following functionalities:

- ▶ User management of extended data model
- ▶ Other extensions are implemented as modifications (e.g. ability and competence maps, dashboards, metrics)

## Renewed user management

The new user management is based on the HUB platform. Previously, accessing the portfolio user management required a separate administration interface. For example, user IDs were edited through it. In the new platform, user information is in its own portfolio, where the data is also managed.

## New opportunities

When users are in their own portfolio, a more extensive portfolio model can be introduced. The data model can then be modified flexibly, as needed. For example, competence areas can be defined for users. The views can be fully parameterised, as needed. For example:

- ▶ Competence management: searching for a user based on competence area
- ▶ Detailed contact information
- ▶ Resourcing in one portfolio – other portfolios use the resourcing portfolio data

## Administrator's perspective

- ▶ User management is transferred from the current user management interface to its own portfolio

## User's perspective

- ▶ Hour entries can also be made through one portfolio into other portfolios in the organisation
- ▶ Centralisation of Kanban task management under personal "MyKanban" or "MyDashboard" – the user can easily find all their tasks defined in different portfolios in one place.

ID	Name	Application portfolio address	Home organisation in application portfolio	Role in home organisation	Role in other organisations	Last login
148	Convent Ganes	IT		Administrator	Administrator	
149	Heidi Cross	IT		Administrator	Administrator	
154	Courtesy Noelle	IT		Administrator	Administrator	
157	Subina Lee	IT		Administrator	Administrator	

**Basic information**

Userid: 24

\*Full name: Laddy Hamilton

\*Owner organization: Futuregen

\*Username: Laddy.Hamilton

Superior: Cross Noelle

\*Email: [empty field]

Is integrated: ☐

Is archived: ☐

Valid until: [empty field]

Avatar: [empty field]

**Actions**

Send username and password to user

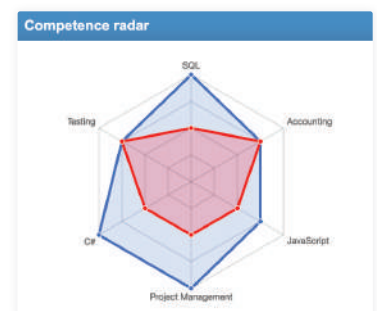
Impersonate

User access report

User in use?

Portfolio	Own organization	Internal role	External role
1 Project portfolio	Thinking Portfolio Demo Area		All rights
2 Resource portfolio	Thinking Portfolio Demo Area	Main users	Main users
3 Application portfolio	Thinking Portfolio Demo Area	Administrator	Administrator
4 Idea portfolio	Thinking Portfolio Demo Area	Edit	Read

Figure 3. Dashboards of the renewed user management: user list, basic data, functionalities, access rights and competence map.



# Risk Management Portfolio

– A platform for the strategic management of your risk portfolio

Product Line	Risk Hierarchy	Risk ID	Risk Owner	Risk Manager	Trend	Future estimate	Ongoing Actions	Risk Category	Risk Name	Risk Score	Owner Organization	Risk Approval	Date created
Daily Bulk	Manufacturing risk	90	RiskOwner Demo	RiskManager Demo	▲	▲		Operational Risks	Manufacturing risk	25	Thinking Portfolio Demo Area	Draft	29/07/2019
Office Selection	Financial Loss	91	RiskOwner Demo	RiskManager Demo	→	→		Financial Risks	Financial Loss	8	Thinking Portfolio Demo Area	Draft	01/08/2019
Happy Bears	Environmental Risk	92	RiskOwner Demo	RiskManager Demo	▲	▲		Hazard Risks	Environmental Risk	5	Thinking Portfolio Demo Area	Draft	01/08/2019
Daily Bulk	Safety Risk	93	RiskOwner Demo	RiskManager Demo	→	→		Hazard Risks	Safety Risk	8	Thinking Portfolio Demo Area	Draft	01/08/2019
Daily Bulk	Foreign exchange risk	94	RiskOwner Demo	RiskManager Demo	→	→		Financial Risks	Foreign exchange risk	6	Thinking Portfolio Demo Area	Waiting for Approval	01/08/2019
Happy Bears	Interest rate risk	95	RiskOwner Demo	RiskManager Demo	→	→		Financial Risks	Interest rate risk	9	Thinking Portfolio Demo Area	Approved	01/08/2019
Office Selection	Talousturvallisuus	96	RiskOwner Demo	RiskManager Demo	→	→	1	Operational Risks	Talousturvallisuus	16	Thinking Portfolio Demo Area	Approved	01/08/2019
Instant Coffee	Risk of price war	97	RiskOwner Demo	RiskManager Demo	→	→	2	Strategic Risks	Risk of price war	4	Thinking Portfolio Demo Area	Approved	01/08/2019
Instant Coffee	Political Risk	98	RiskOwner Demo	RiskManager Demo	→	→		Strategic Risks	Political Risk	6	Thinking Portfolio Demo Area	Approved	01/08/2019
Instant Coffee	Distribution risk	101	RiskOwner Demo	RiskManager Demo	→	→	1	Strategic Risks	Distribution risk	6	Thinking Portfolio Demo Area	Approved	27/01/2020
Office Selection	Risk of illness	102	RiskOwner Demo	RiskManager Demo	→	→		Operational Risks	Risk of illness	8	Thinking Portfolio Demo Area	Approved	09/03/2020
Daily Bulk	Supplier Related Risk	105	RiskOwner Demo	RiskManager Demo	→	→		Financial Risks	Supplier Related Risk	9	Thinking Portfolio Demo Area	Draft	17/03/2020
Daily Bulk	Failure of manufacturing equipment	106	RiskOwner Demo	RiskManager Demo	→	→		Operational Risks	Failure of manufacturing...	9	Thinking Portfolio Demo Area	Approved	17/03/2020
Daily Bulk	Operational risk	107	RiskOwner Demo	RiskManager Demo	→	→	2	Strategic Risks	Operational risk	20	Thinking Portfolio Demo Area	Draft	17/03/2020
Instant Coffee	Fire in manufacturing plant	108	RiskOwner Demo	RiskManager Demo	→	→		Operational Risks	Fire in manufacturing plant	4	Thinking Portfolio Demo Area	Waiting for Approval	17/03/2020
Happy Bears	Delay in Safety Regulation	109	RiskOwner Demo	RiskManager Demo	→	→		Strategic Risks	Delay in Safety Regulation	3	Thinking Portfolio Demo Area	Approved	17/03/2020
Office Selection	HR Risk	110	RiskOwner Demo	RiskManager Demo	→	→		Hazard Risks	HR Risk	3	Thinking Portfolio Demo Area	Draft	17/03/2020
Office Selection	Henkilöriskit	459	RiskOwner Demo	RiskManager Demo	→	→		Hazard Risks	Henkilöriskit	3	Thinking Portfolio Demo Area	Draft	03/06/2022
Daily Bulk	Tuotantoriski	460	RiskOwner Demo	RiskManager Demo	→	→		Operational Risks	Tuotantoriski	8	Thinking Portfolio Demo Area	Approved	03/06/2022
Office Selection	Talousturvallisuus	461	RiskOwner Demo	RiskManager Demo	→	→		Financial Risks	Talousturvallisuus	9	Thinking Portfolio Demo Area	Waiting for Approval	03/06/2022
Happy Bears	Ympäristöriskit	462	RiskOwner Demo	RiskManager Demo	→	→		Hazard Risks	Ympäristöriskit	5	Thinking Portfolio Demo Area	Draft	03/06/2022
Daily Bulk	Turvallisuusriski	463	RiskOwner Demo	RiskManager Demo	→	→		Hazard Risks	Turvallisuusriski	9	Thinking Portfolio Demo Area	Approved	03/06/2022
Daily Bulk	Valuutariski	464	RiskOwner Demo	RiskManager Demo	→	→		Financial Risks	Valuutariski	6	Thinking Portfolio Demo Area	Approved	13/06/2022
Daily Bulk	Tuottavuusriski	465	RiskOwner Demo	RiskManager Demo	→	→		Financial Risks	Tuottavuusriski	9	Thinking Portfolio Demo Area	Approved	13/06/2022

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.



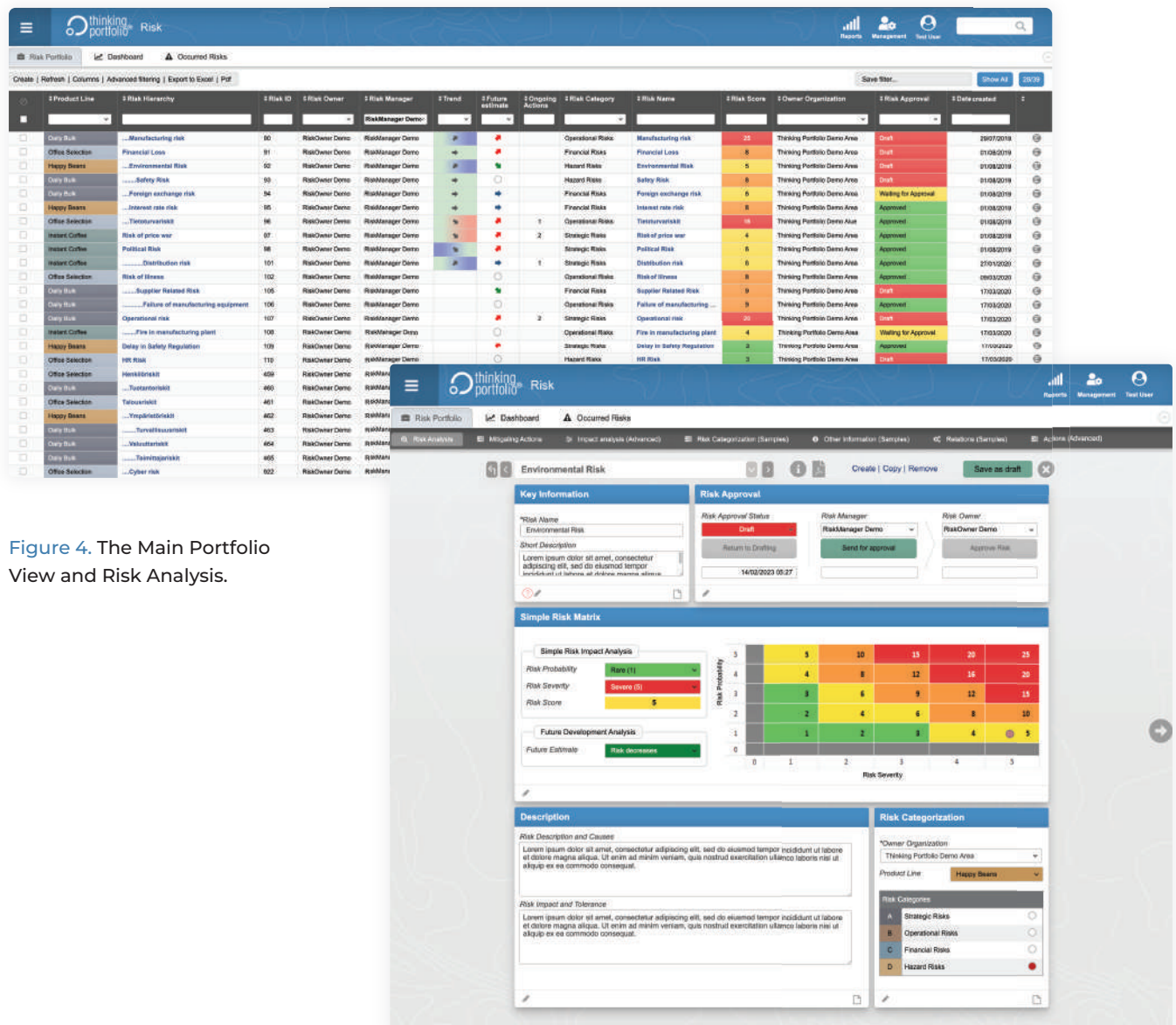
# The Main View of Your Risk Portfolio

– 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 4) 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.



# 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.

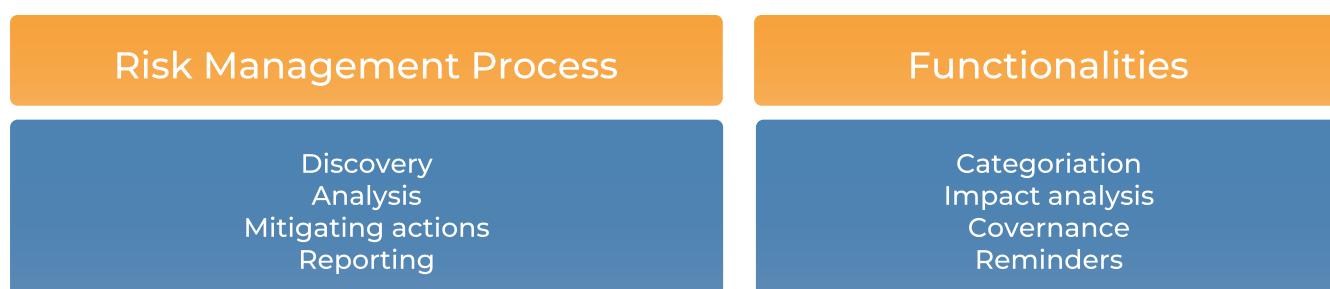


Figure 4. Thinking Portfolio's Risk Management Reference Model

The starting points for the development of the Risk Management Reference Model were international frameworks for Risk Management such as COSO Enterprise Risk Management and ISO 31000:2018 Risk Management and ISO 27001.

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.

## 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 EHSQI) 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 7](#) 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 8](#)) facilitates a quick analysis of the risks. Risk analysis may be filled with a simple drop-down menu ([Figure 9](#)). 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. The user interface may include pictures as tooltips. For example, here is a simple 5x5 matrix ([Figure 10](#)).

Thinking Portfolio offers a flexible and easily modifiable management of risk mitigation actions ([Figure 11](#)). 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 prioritisation based on criteria.

Figure 7. Risk Approval

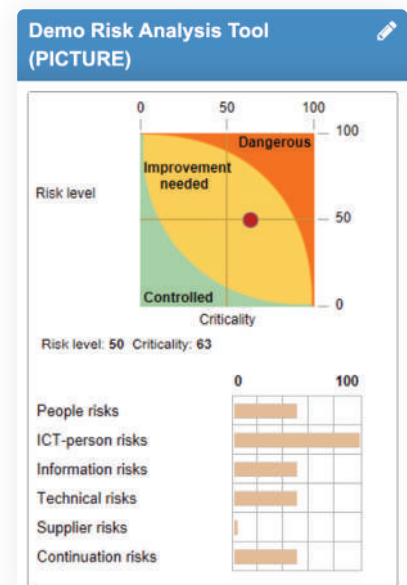


Figure 8. Simple Risk Analysis Tool

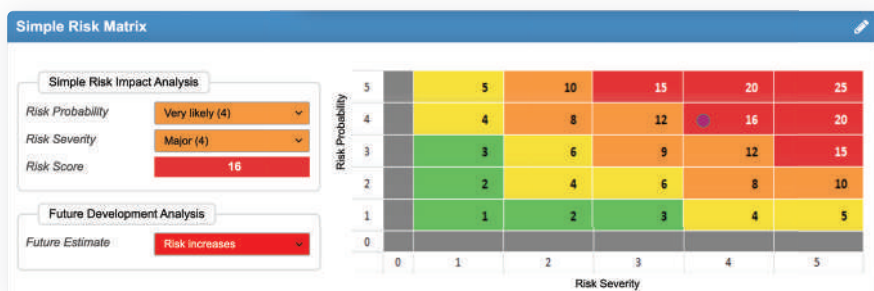


Figure 9 and 10. Simple Risk Matrix

Risk Mitigating Actions									
Action	Description	Type	Start	End	Responsibility	Status	Cost	Link	
1	Systems/equipment list	Systems/equipment list which need to be connect to New Process control system	Select Date	Select Date		Suspended			
2			Select Date	Select Date					

Figure 11. Risk 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 (Figure 14) 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.

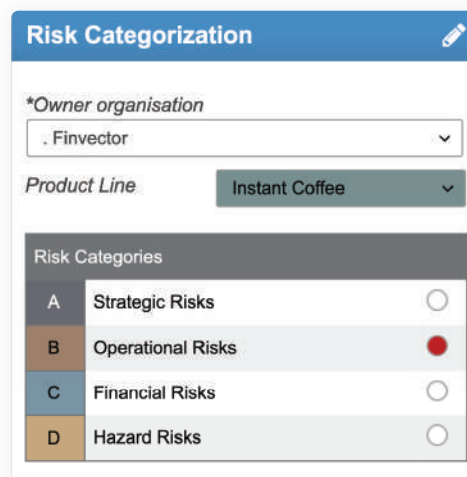
Thinking Portfolio has an ever growing set of risk analysis tools that are further developed in co-operation with the customers. The tools may be used for a quick as well as more comprehensive analysis of the risks. Analysis may be aligned with organisations' core processes and functions in order to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

With a more detailed business and finance risk analysis, 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 15 and Figure 16. There is a possibility to use fully customised comprehensive forms and check-lists to ensure preciseness, efficiency and compliance. An example of this is, for example, the needs according to the information security standard ISO 27001.

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.



**Risk Categorization**

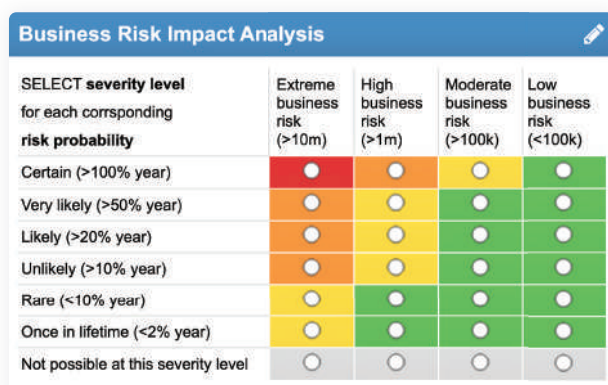
\*Owner organisation  
Finvector

Product Line  
Instant Coffee

Risk Categories

A	Strategic Risks	<input type="radio"/>
B	Operational Risks	<input checked="" type="radio"/>
C	Financial Risks	<input type="radio"/>
D	Hazard Risks	<input type="radio"/>

Figure 12. Risk Categorization



**Business Risk Impact Analysis**

SELECT severity level for each corresponding risk probability	Extreme business risk (>10m)	High business risk (>1m)	Moderate business risk (>100k)	Low business risk (<100k)
Certain (>100% year)	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Very likely (>50% year)	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Likely (>20% year)	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Unlikely (>10% year)	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Rare (<10% year)	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Once in lifetime (<2% year)	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Not possible at this severity level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 14. Business Risk Impact Analysis



**Risk Hierarchy**

Parent Risk

Upper level risk (alternative)

Select option

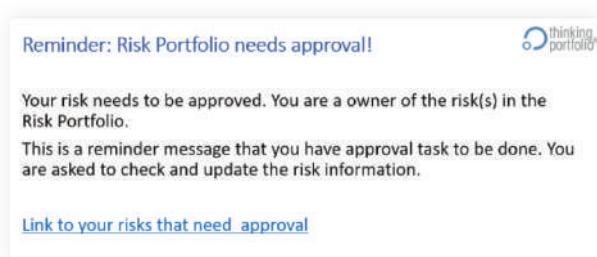
Figure 13. Risk Hierarchy



**Risk Analysis On Dimensions**

Select risk probability on each perspective	Extreme Risk	High Risk	Moderate Risk	Low risk	No Impact
Health & Safety	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Hazard	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Production	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Finance	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Figure 15. Risk Analysis On Dimensions



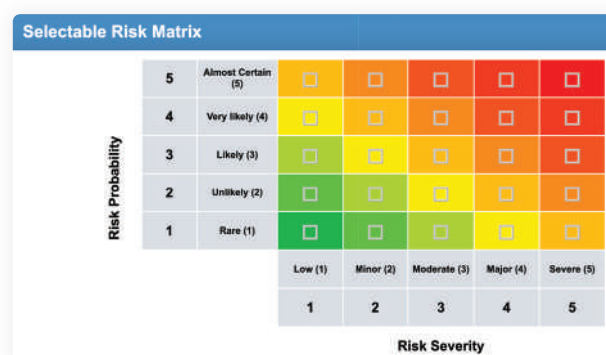
Reminder: Risk Portfolio needs approval!

Your risk needs to be approved. You are a owner of the risk(s) in the Risk Portfolio.

This is a reminder message that you have approval task to be done. You are asked to check and update the risk information.

[Link to your risks that need approval](#)

Figure 17. Reminders



**Selectable Risk Matrix**

5	Almost Certain (5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Very likely (4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Likely (3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Unlikely (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	Rare (1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Low (1)	Minor (2)	Moderate (3)	Major (4)	Severe (5)
		1	2	3	4	5

Risk Severity

Figure 16. Selectable Risk Matrix



# Reporting

– Views to the portfolio for communication, documentation, analysis and decisions

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

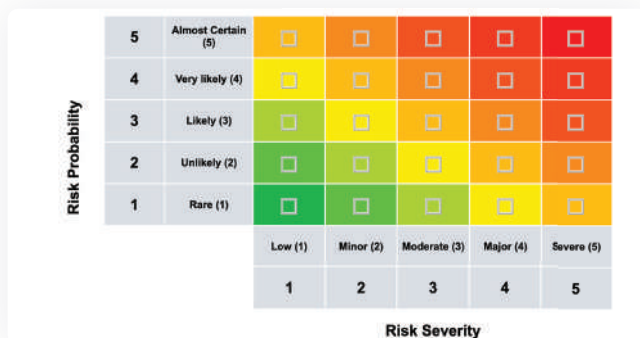


Figure 19. Heatmap report

Figure 20. Detailed risk analysis

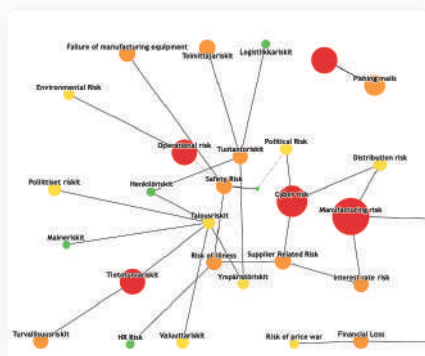
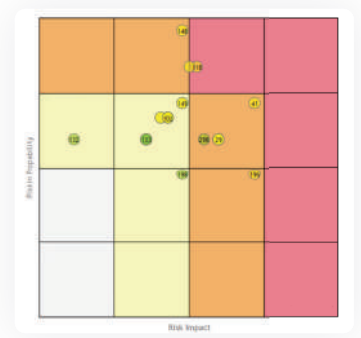


Figure 21. Risk Dependency Map

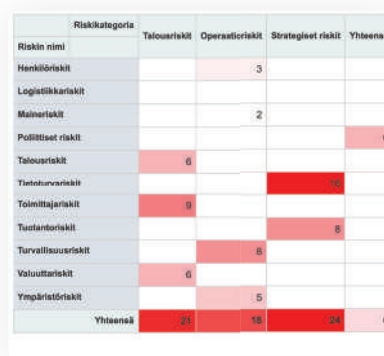


Figure 22. Pivot report

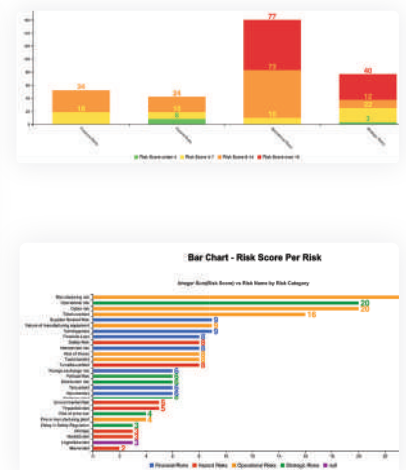


Figure 23. Pivot report visualization

# 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. Change log



Figure 25. Comments

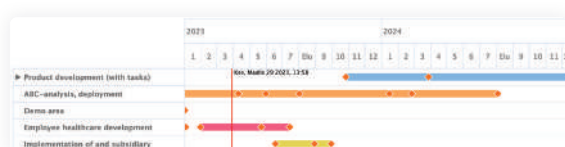


Figure 26. Gantt charts



Figure 27. Program

## 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 24). 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 strategic items is an available option (Figure 25). 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 26). Reports make the communicating status of actions easy and visual.

At the portfolio level, the roadmap report (Figure 27) 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.

# Customisation

## Customisation

Thinking Portfolio is customized to meet the customer's portfolio needs, as well as portfolio management processes and concepts. The user interface can be in the Finnish, Swedish, English, German, or Dutch languages (Figure 28).

Conceptual independence and parameterization have been the starting points for the design of Thinking Portfolio's database structure. Customers can personally modify the tool facilitating the maintenance of the directory fields visible in different user interfaces.

## Different Portfolio Models

Thinking Portfolio's basic components – the widgets – facilitate the construction of various portfolio models. The widgets' content can be parameterized according to the concepts used by the customer.

The application's database solution has designed for maximum flexibility; customer-specific customization requires no structural modifications in the database. Thanks to its structural solution, customizing the application customer-specifically for Proof of Concept use is rapid.



Figure 28. Risk Portfolio examples

# Deployment and Use

## User interface

Thinking Portfolio is a fully responsive browser-based application, allowing its mobile use. It is compatible with the newest browsers.

## User management

The access rights in Thinking Portfolio are defined role-based. Roles can include CIO, Data Architect, Application Owner, Technical Administrator, System Administrator, Viewer User etc. The role nomenclature will be customer-specific and can be maintained by the customer's Administrator.

Each Portfolio has one root user or more, with the largest access rights, e.g., App Startup permissions. The root user can be specified for the whole portfolio or the portfolio of a given business division.

After logging into the system, the user is allowed, according to their role, to only view and report certain data in the application, or edit the data.

## User authentication

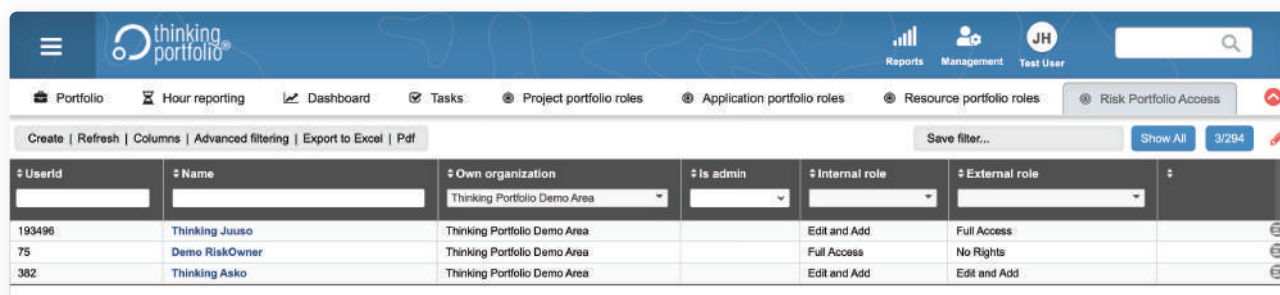
The application supports two ways of user authentication: Microsoft AD authentication and the in-app username + password authentication.

## Federated single sign-on (ADFS / Azure AD)

The single sign-on is based on Microsoft Active Directory Federation Services (ADFS), and Thinking Portfolio also supports SAML 2.0 and Azure AD solutions.

When the user arrives at the sign-on address defined for the company, the user is redirected to the company's own authentication service. After logging in with the organisation's username, the user will be redirected again to the Thinking Portfolio service. If the user is already in the company's own authentication service, there is no need to enter a username or password, the redirectioning will be immediate (AD/SSO concept).

Traditional usernames and passwords can be used with external Internet users.



Userid	Name	Own organization	Is admin	Internal role	External role
193496	Thinking Juuso	Thinking Portfolio Demo Area		Edit and Add	Full Access
75	Demo RiskOwner	Thinking Portfolio Demo Area		Full Access	No Rights
382	Thinking Asko	Thinking Portfolio Demo Area		Edit and Add	Edit and Add

Figure 29. User Management



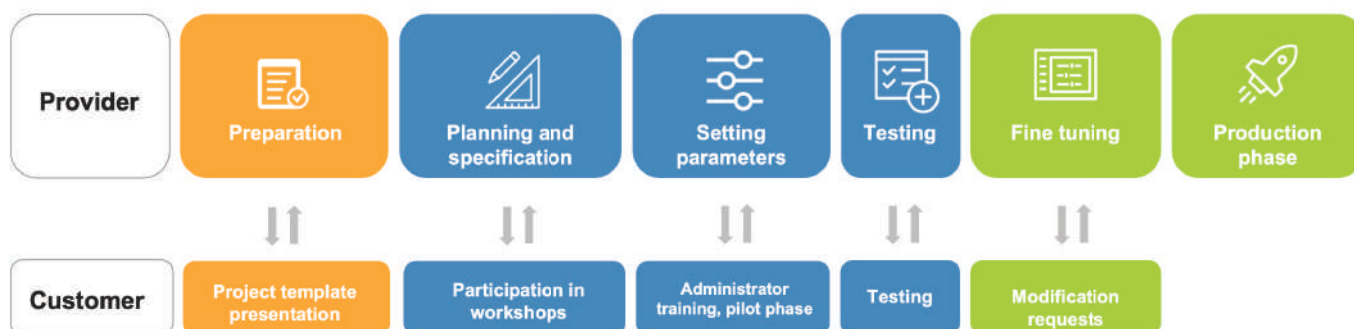


Figure 30. Deployment process

## Connections to external systems

Thinking Portfolio can be equipped with connections to various external data systems, like PowerBI, Teams, Outlook, ServiceNow, Jira, Salesforce, SAP, M-Files, Slack etc.

The URLs entered in the application text fields and referring to documents are automatically transformed into hyperlinks, including when using Teams workspace to save documents.

The REST API interface is a new solution to create real-time integrations. The connections are described more in detail in the Thinking Portfolio Integration Whitepaper. We will be happy to tell you more about the implementations made and draw an appropriate solution for you.

## Our cloud computing model

Thinking Portfolio offers portfolio management under a Private Cloud model. Our cloud data is always stored in Finland. There is no need for the customer to install any application components into their own environment, and the version available will always be the newest one.

We offer the service with a fixed-price monthly fee, with no user limitations.

Use and maintenance are browser-operable with an SSL-encrypted connection. It is possible to limit the use to certain IP addresses only.

Our service model includes support for the customer's Administrator.

## Proof of Concept (PoC)

If required, we can carry out together a fast Proof of Concept project (PoC) for our customer. After a few work meetings, we will implement the application with customer-specific adaptations, and it will be usable on our server during the period agreed.



# Risk Portfolio Management

**Free and open to everyone**

Thinking Portfolio has published a second course, this time focusing on Risk Portfolio Management, on the eAcademy learning platform. eAcademy has previously published the Practical Project Portfolio Management course focusing on Project Portfolio Management.

Successful business is based on risk management. Risk management is also essential for non-commercial organizations. Risk management has become even more demanding in a rapidly changing operating environment. It requires leadership to manage the situation constantly and every employee to be able to identify and manage risks.

This course aims to increase the knowledge of leadership and experts regarding strategic and operational risk management, portfolio management and portfolio management. In addition, it also introduces risk portfolio solutions and implementations.

The course consists of three lessons, the first focusing on risk management, the second on risk portfolio management and the third on risk portfolio implementation. The web-based lessons will provide in-depth coverage of the topic through exercises, short videos and text content.

**The course is free of charge and can be taken in either Finnish or English.**

**The course can be accessed on the website after registration:**

[eacademy.thinkingportfolio.com/en](https://eacademy.thinkingportfolio.com/en)



# Practical Project Portfolio Management

**Free and open to everyone**

Thinking Portfolio launches Portfolio Management eAcademy, an online course on project portfolio management, open to all and in clearly explained language. The learning environment is open to everyone and is free of charge. Currently, eAcademy offers online courses in Finnish, Swedish, English, German and Dutch on project portfolio management. Thinking Portfolio is developing eAcademy in response to user feedback.

The online portfolio management course is designed to be practical and targeted at decision-makers, project owners and project managers who are considering or preparing to implement a project portfolio. The course is also ideal for organisations where the project portfolio has already been introduced as a useful knowledge package on the basics of portfolio management. Participants can attend the course sections they are interested in.

The course takes approximately two hours to complete, including assignments.

The course consists of three lessons, the first focusing on portfolio management, the second on project management and the third on project portfolio implementation. The course is not an alternative to a certification but participants, after completing the course, can download a certificate. This shows that the participant has gone through the entire content of the course and completed the required tasks.

The course can be accessed on the website after registration:

[eacademy.thinkingportfolio.com/en](https://eacademy.thinkingportfolio.com/en)



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*risk portfolio*

*NPD portfolio*

*application portfolio*

*project portfolio*

*tasks portfolio*



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