

APPLICATION PORTFOLIO MANAGEMENT

PROPOSED IMPLEMENTATION APPROACH

Agenda:

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01

EXECUTIVE SUMMARY

Executive summary

What is Application Portfolio Management (APM)

APM is one of the core initiatives in the Enterprise Architecture (EA) toolbox, gathering all applications data into one place making it easy to maintain. APM facilitates informed decision making to avoid Application redundancy and optimize cost.



Why we need APM

- It is a Member Firm obligation as per [GQRMM 16.6.4](#)
- Get visibility into all applications used in the organization
- Assess the application portfolio to identify rationalization projects
- Identify opportunity to modernize applications
- Lifecycle Management and Planning



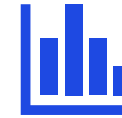
Challenges

- No single source of truth and informed decision making
- Apps accumulate over time resulting redundancy, waste, sub-optimal performance and higher cost
- Lack of cohesion across application and software platform lifecycles
- APM integration with ITS Global, planned for Q4, FY23 and will require significant effort.



Benefits

- Identify EOL SW products
- Map infrastructure to application
- View of which critical apps support key business initiatives
- Find duplicated and obsolete apps
- Analyse technology dependencies and risks



Application rationalization drives

- Improved IT portfolio management capabilities
- Empowers leaders to make better decisions
- Enhances the delivery of key mission and business services.

02

SITUATIONAL ANALYSIS

Assessment of current APM process and tools

- We currently do not perform a review of our existing applications (only implicitly through budget discussions).
- The <Undisclosed> site is used to track Application assets
- Information in <Undisclosed> is often incomplete, outdated or poor quality
- The IT-Enterprise Portfolio section of <Undisclosed> is commonly empty and not used.
- Service Catalogue does not provide all features required to create common Roadmaps and Plans, which is essential to APM.
- The current ITSM Technology Stack is fragmented and distributed across multiple sites (data sources)
- Not enough information to make application lifecycle decision (app migration assessment, R questions)
- The APM Review Process is a Member Firm obligation as per [Global Quality & Risk Manual: <Undisclosed>](#)
- Gaps exist in mandatory information required to comply with [Security Standard: Solution Acquisition, Development, & Maintenance](#)

03

BUSINESS OBJECTIVES

Business Objectives

- Get visibility into all applications used in the organization
- Assess the application portfolio to identify rationalization projects
- Identify EOL SW products
- Identify opportunity to modernize applications (move to the Cloud)
- Lifecycle Management and Planning
- Analyse technology dependencies and risks
- Cost and Resource Optimization
- Better view of the Portfolio per Business Unit
- Understanding Application Business Value to optimize (whether the app is still good for business)
- Consolidate Redundant Applications

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**PROPOSED
SOLUTION &
IMPLEMENTATION
APPROACH**

Application Rationalization Process



Start APM review

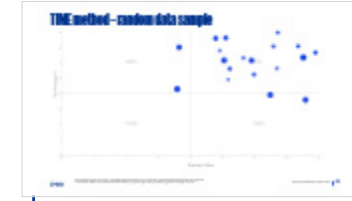
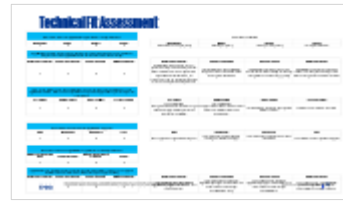
The process is triggered by:

- End of Life for technology component
- Annual review .



Assess Business and Technical Fit

- Review questionnaire responses
- Determine TCO



Make a Decision

- Understand application value using Gartner TIME method
- Keep or retire the App

Gather Application Information

- Send questions
- Validate responses.

Score Application

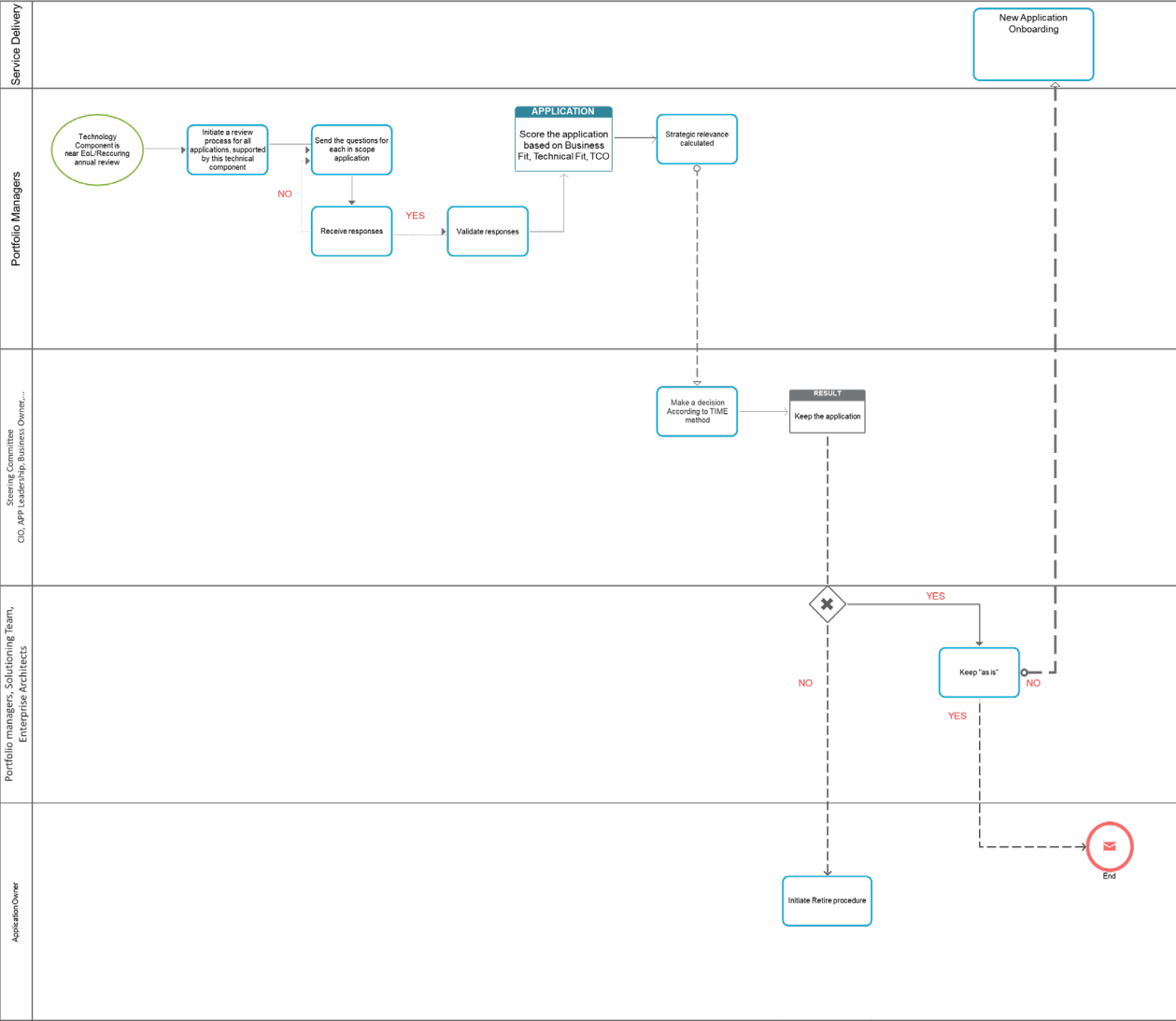
- Review application score based on business fit, technical fit and cost



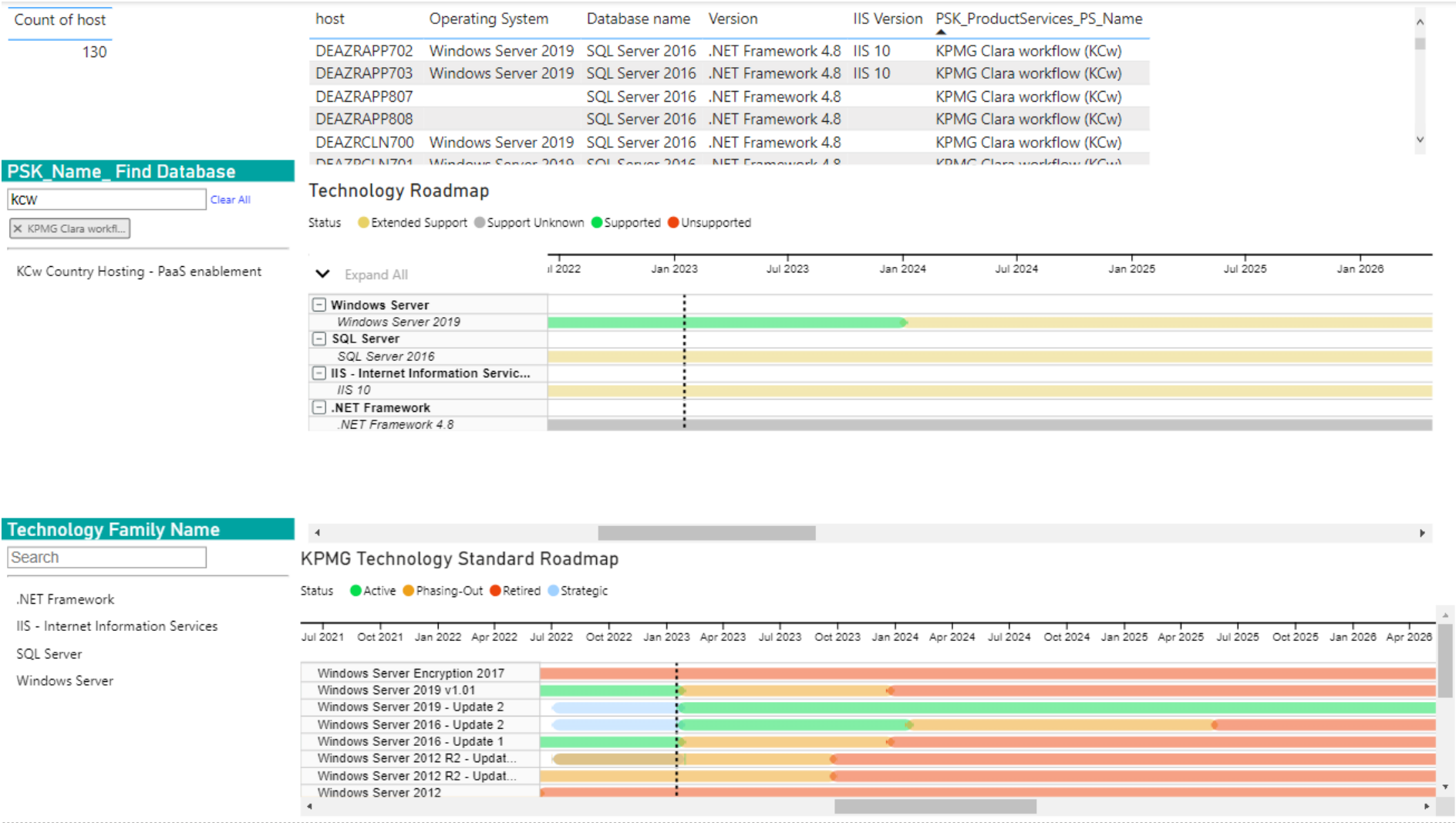
Application Disposition

- Decide application target Landscape .

APM Review Process



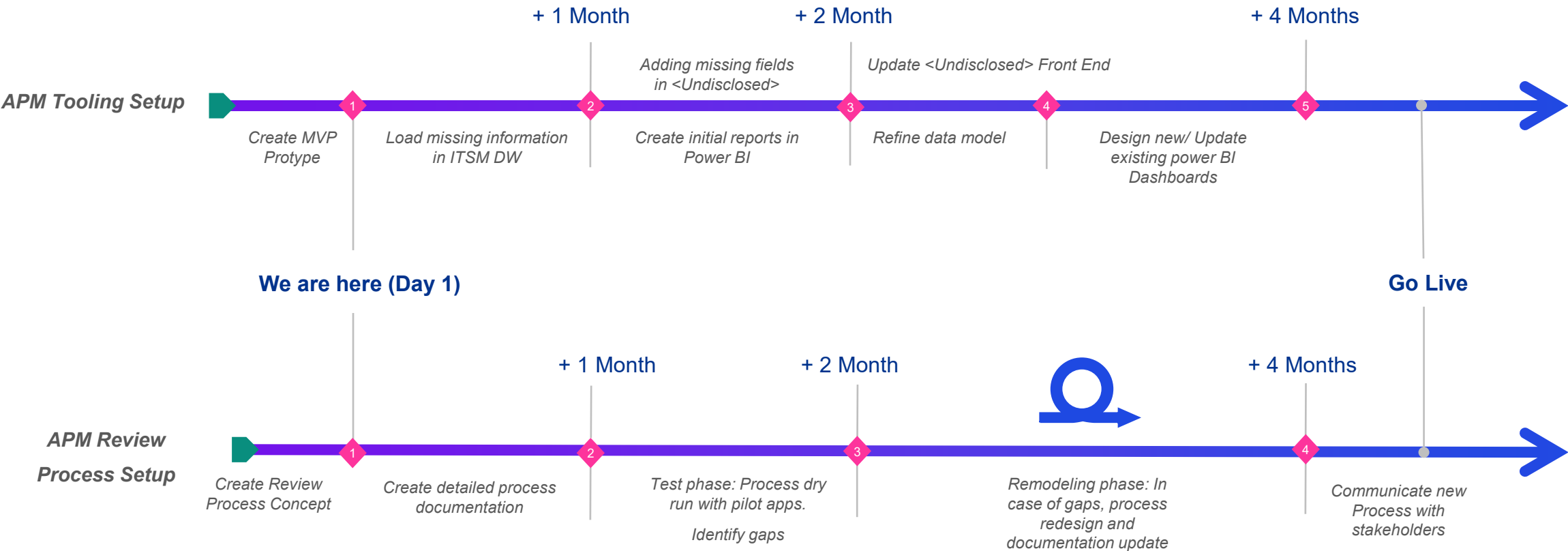
Power BI Dashboards



Link to Power BI dashboards



Application portfolio management Key Milestones



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SOLUTION INVESTMENT

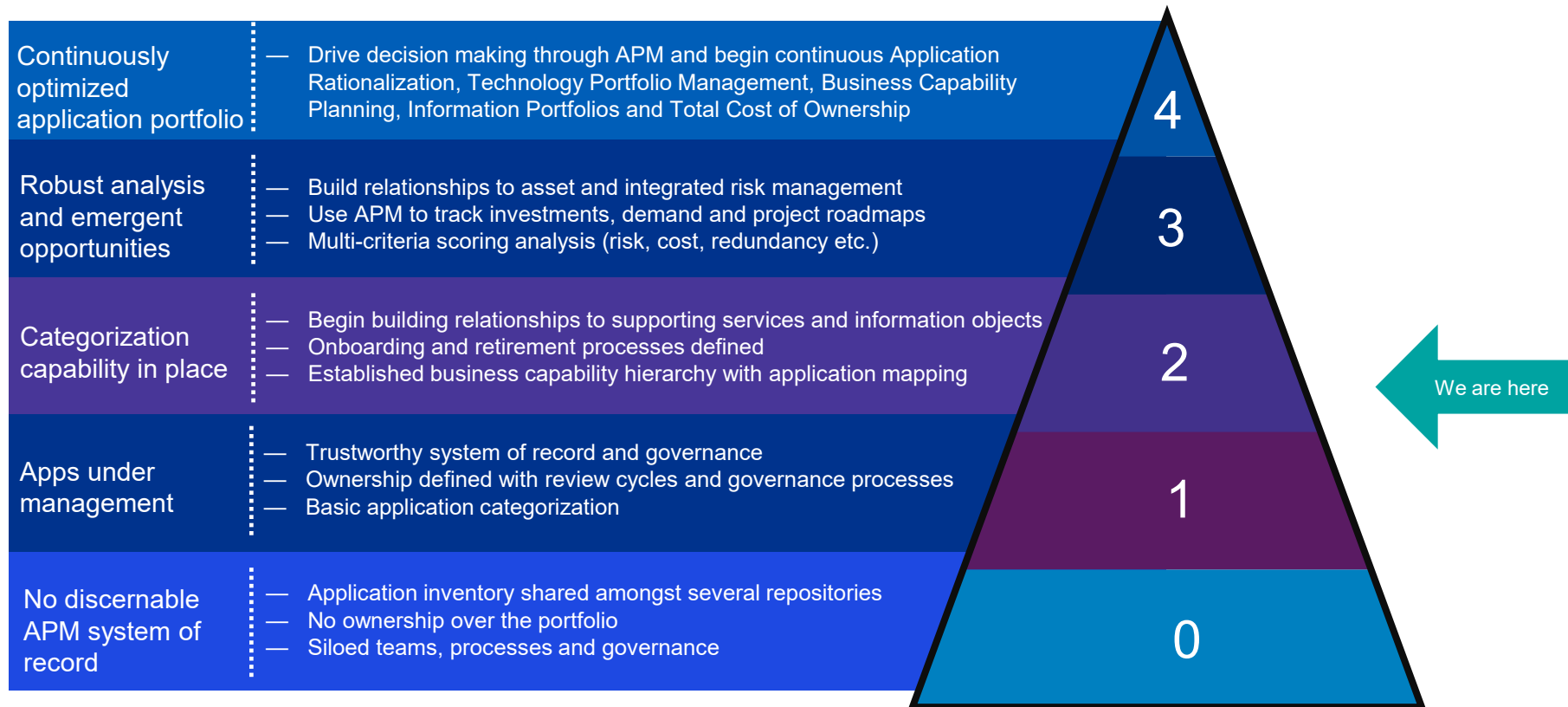
Investment Estimation

Stream	Roles	Estimation FTE	Duration	Estimation MDS	Estimation EUR
Project Management Stream	Project Manager	0.25	4 months	20	XXXX
	Data Architect	0.25	4 months	20	XXXX
Reporting Development	Data Engineer	0,25	4 months	20	XXXX
	SharePoint Architect	0,50	4 months	40	XXXX
<Undisclosed Product> Lifecycle Update	Front End Developer	0,50	4 months	40	XXXX
	Service Manager	0,50	4 months	40	XXXX
APM Review Process Setup Stream	Enterprise Architect	3 x 0,25	4 months	60	XXXX
	Portfolio Manager	0,50	4 months	40	XXXX
TOTAL:					XX XXXX



Backup Slides

APM - Maturity model



Drivers for Application Portfolio Management

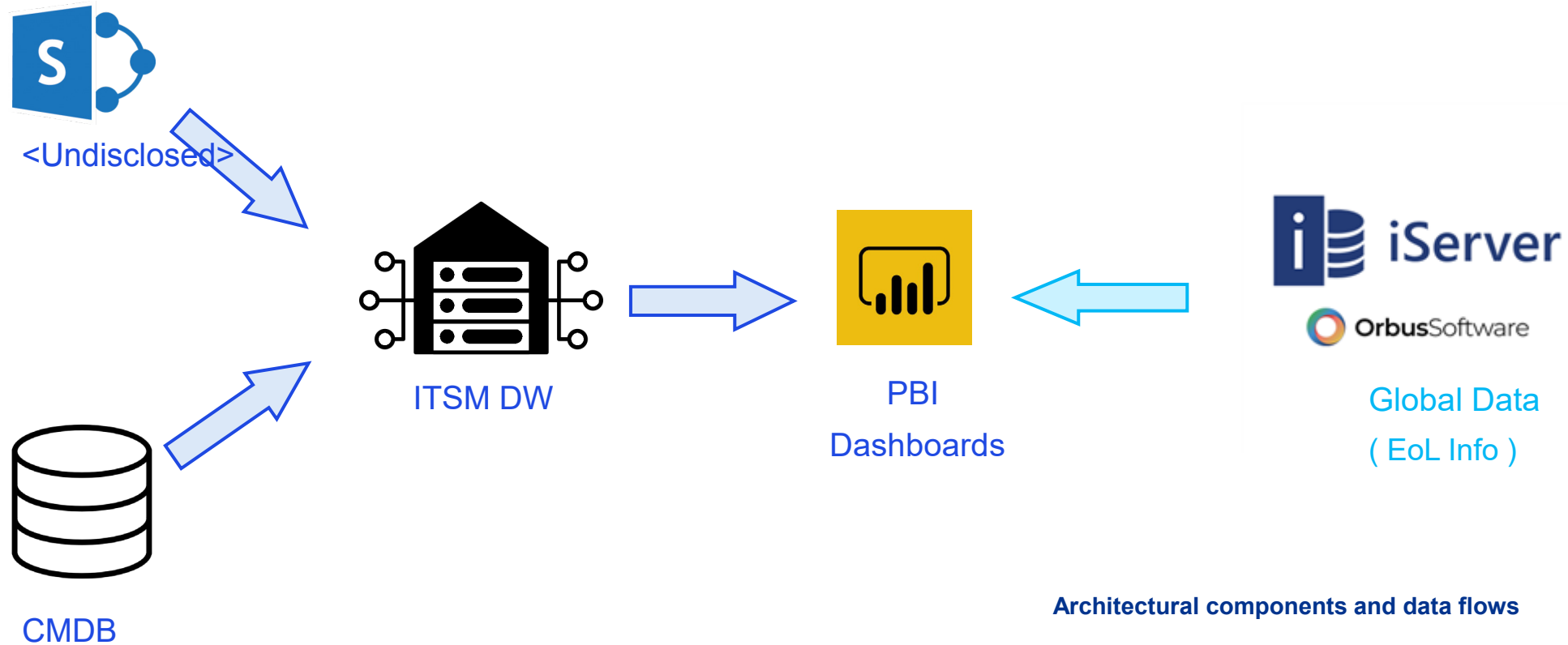


Identified gaps

- New fields in <Undisclosed> n

<Undisclosed> New Field	Type
Application Phase	List - Active, Envisioning, Phase In, Phase Out, Retired
Review Date	Date
Next review date	Date
Review Comment	Text (output from Review)
Phase In From	Date
Productive From	Date
Phase Out From	Date
Retire	Date
Application Version(?)	Text (App version/Release)
Application type	COTS, Hybrid, Custom

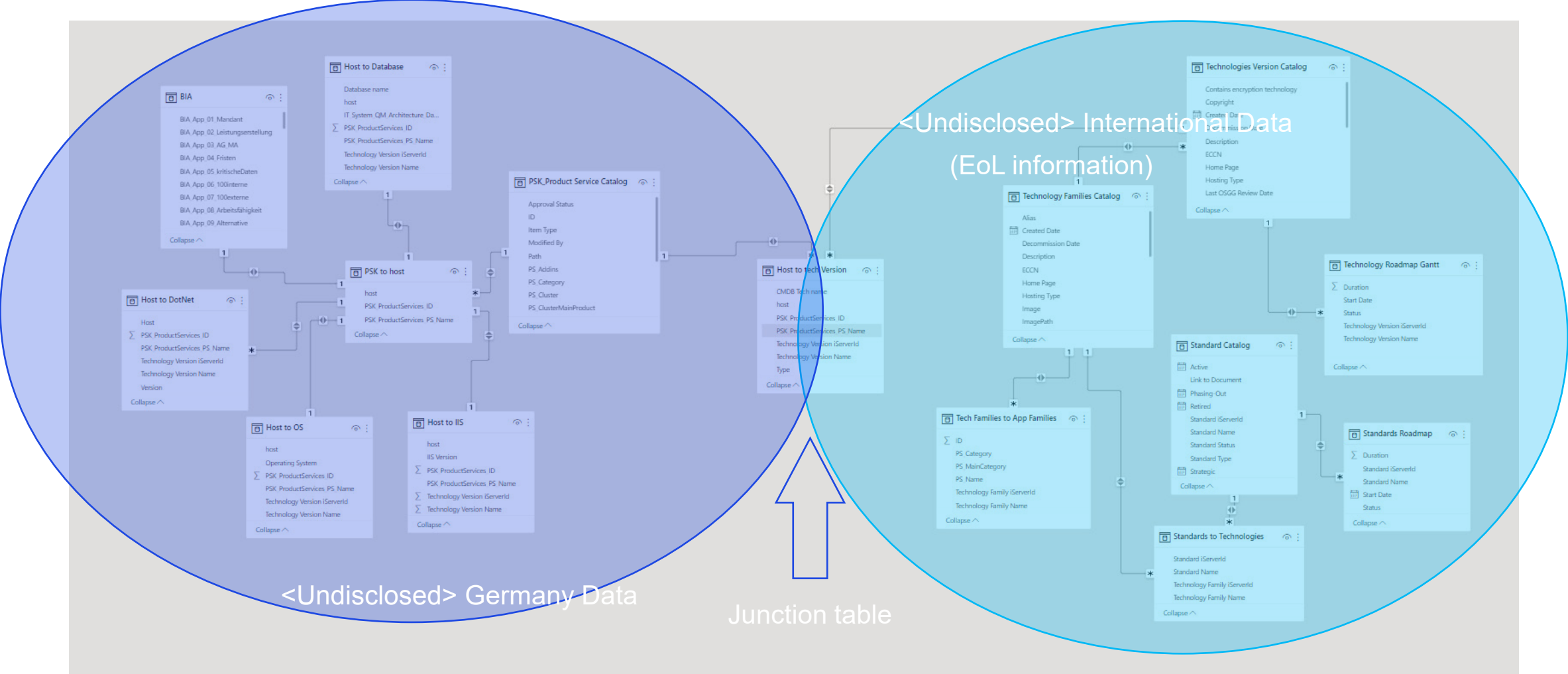
APM Tooling - Data Architecture for dashboards



Architectural components and data flows

- <Undisclosed> SharePoint – <Undisclosed> Germany
- CMDB – <Undisclosed> Germany
- ITSM DW – <Undisclosed> Germany
- iServer – <Undisclosed> International

Power BI Data Model



RACI Matrix - proposed

Process	Activities	CIO	Enterprise Architects	Portfolio Managers	Application Owner Leadership	Application Owners	Business Owners
Understand Business and IT Environment	Understand business objectives, capabilities & expectation	A	R	C	C	I	I
	Current business capabilities & IT Issues	A	R	C	C	I	I
	Application Rationalization area of focus	A	R	C	I	I	I
Design Application Portfolio Model	Evaluate current application portfolio to capabilities	I	C	A	R	C	C
	Design future application portfolio model	I	C	A	R	C	I
	Define scoring model	I	C	A	R	C	I
	Standard template available to collect information?	I	I	A	R	C	I
	Design Standard template/Select standard APM tool	I	I	A	R	C	I
Collect Application Information	Collect Information	I	I	C	I	A	R
Analyze Portfolio	Are new applications being added to the portfolio	I	C	A/R	C	I	I
	Execute demand management process	I	I	A/R	C	I	I
	Define/Update Taxonomy (Business Functions and sub-functions)	I	C	A/R	C	I	I
	Map applications to business function and sub function	I	C	A	R	C	C
	Analyze applications in scoring model	I	C	A	R	C	I
	Recommend Dispositions	I	C	A	R	C	C
Create Roadmap & Allocate Budget	Identify and assign owners	I	A	I	R	C	I
	Perform cost-benefit analysis	I	C	C	I	A/R	I
	Create timeline and schedule	I	I	A	C	R	I
	Authorize & allocate budget	A	I	I	I	I	I
	Obtain resources	I	I	A/R	C	C	I
Execute Dispositions	Execute Dispositions	I	I	A	R	C	I
	Execute Disposition- Retain, Consolidate & Reengineer	I	I	A	R	C	I
	Execute Disposition: Retire	I	I	A	R	C	I
	Govern by APM Subcommittee	I	I	A	R	C	C
Monitor Applications	Identify any change required in tools & processes to monitor application	I	I	A/R	C	C	C
	Identify any change in Vendor Roadmap	I	C	A/R	C	C	C
	Identify any change in Enterprise Architecture Roadmap	I	A	R	C	C	C
	Identify any change in business/IT Transformation	I	C	A/R	C	C	C
	Evaluate Application	I	I	C	I	R	I

CIO	The CIO looks at the holistic view of the application portfolio management processes, IT strategic roadmaps, current application landscape and financial investments. CIO is responsible for the following activities: • Provides strategic direction and is responsible for implementation of IT systems in support of business operations in order to improve cost effectiveness, service quality and business development • Chairs Steering Committee
Enterprise Architects	Enterprise Architects take a company's business strategy and define IT system architecture to support that strategy. Enterprise Architects must understand a company's business and be able to dive deeply into technology issues. They ensure a company's technology objectives are aligned to its business goals. Responsible for: • Alignment of the Application Portfolio to the business • Defining the corporate Technology Standards and technology lifecycles • Supporting role in investment planning and direction • Collaborating with overall Application Portfolio Process Owner on process changes/continual improvement
Portfolio Managers	APPLICATION PORTFOLIO MANAGER The application portfolio manager responsible for the following activities: • Owns the application portfolio for a specific function • Defines the portfolio objectives and roadmap in alignment with organizational strategy • Provides feedback and recommendations to CIO and App Owner Leadership about application lifecycle and dispositions • Accountable for evaluating their portfolio against the application scoring model
Application Owner Leadership	The application director is responsible for the following activities: • He oversees application analysts • Provides recommendations to application dispositions and funding decisions • Participate in Steering Committee
Application Owners	The primary person responsible for managing and ensuring the delivery, function, and services of the Application. Responsible for: • Manual data entry of application data such as name, application delivery, ownership, etc. • Timely response to periodic assessments, certifications, and audits. • Timely updates to reflect changes to the application. • Relating information objects to the application. • Submitting application service requests. • Maintenance of application roadmap.
Business Owners	Typically, a manager in a business unit that owns the services the Application provides to end users and all aspects of the Application from a business perspective. Likely/Often responsible for investments related to the application at an approver level. Should be the most knowledgeable as to the Capabilities provided to the company by the application. Responsible for: • Business Capability alignment of owned Business Application • Timely response to periodic business level assessments, certifications, and audits. • Collaborating with overall Application Portfolio Process Owner on process changes/continual improvement. • Participate in Steering Committee

Business Fit Assessment

Application meets its intended business requirements

Low	Acceptable	Sufficient	Complete
1	2	3	4

How satisfied are you with the features of the application?

Not satisfied at all	Unsatisfied	Satisfied	Extremely satisfied
1	2	3	4

Application capability/functionality DOES NOT exist within another application used in <Undisclosed> Germany

Strongly disagree	Partially disagree	Partially agree	Strongly Agree
1	2	3	4

Application is flexible and able to meet quickly changing business requirements and provides effective Time-to-Market.

Insufficient	Adequate	Fully Sufficient	Exceeds
1	2	3	4

Application responses quickly and business user DO NOT have to wait

Strongly disagree	Partially disagree	Partially agree	Strongly Agree
1	2	3	4

Application is easy of use, interface is intuitive. New employee can be trained quickly to work with this application.

Strongly disagree	Partially disagree	Partially agree	Strongly Agree
			

Questions definition

Low	Acceptable	Sufficient	Complete
Coverage rate < 25 %	Coverage rate > 25 %	Coverage rate > 50 %	Coverage rate > 75 %

Not satisfied at all	Unsatisfied	Satisfied	Extremely satisfied
No sufficient or wrong functionality.	Rudimentary technical suitability	All main functions available.	High number of functions available.

Strongly disagree	Partially disagree	Partially agree	Strongly Agree
Most of the functionalities can be covered by more than one applications	Most of the functionalities can be covered by another application	Some of the functionalities can be covered by another application	Only the application covers the required functionalities

Insufficient	Adequate	Fully Sufficient	Exceeds
New functions and wishes are only available with significant time expenditure.	Are available with a high expenditure of time.	Are available quickly.	Are available "at the push of a button".

Strongly disagree	Partially disagree	Partially agree	Strongly Agree
The response of the application is very often slow or unresponsive	Users experience difficulties due to delayed application response time relatively often	The application works fine, sometimes there is a delay in application response, but it doesn't happen often	The application works quickly and users can do their task without delay

Strongly disagree	Partially disagree	Partially agree	Strongly Agree
The application is poor to use and forces tedious workarounds and media breaks.	The application supports the user with only a few workarounds.	The application supports the user sufficiently and the operation is easily accessible.	The application looks simply, can be operated intuitively and supports the user optimally.

Technical Fit Assessment

How often does the application experience a major incident?

Very often	Often	Rarely	Never
1	2	3	4

Application IS NOT dependent to legacy (on-prem) infrastructure and software components. This application can be moved to the cloud easily.

Strongly disagree	Partially disagree	Partially agree	Strongly Agree
1	2	3	4

How much efforts does the application need to be changed/maintained? This application DOES NOT require specialized expertise (high skilled personnel) to be maintained

Big effort	Some effort	Small effort	Minimal effort
1	2	3	4

What is the current level of application support?

Low	Adequate	Sufficient	High
1	2	3	4

How often does the application experience a security incident?

More than once per year	Once per year	Rarely (once per 2-3 years)	Never
1	2	3	4

Application can quickly scale to handle greater transaction volumes and support additional users (internal or external to your organization)

Strongly disagree	Partially disagree	Partially agree	Strongly Agree
1	2	3	4

Questions definition

Very often	Often	Rarely	Never
(More than once per year)	(Once per year)	(once per 2-3 years)	no major incidents

Strongly disagree	Partially disagree	Partially agree	Strongly Agree
Application components run on-prem and they are currently end-of-life or will be EoL soon. Apart from operational maintenance, no measures such as replacement with a new IT component are planned.	Re-architecture of application components is needed to allow moving it to the Cloud	Application components can be moved to the cloud easily or already using Cloud services (e.g., IaaS)	Application component are cloud native and they are already in the Cloud using PaaS or SaaS services

Big effort	Some effort	Small effort	Minimal effort
The application change/maintenance requires huge effort and high skilled personnel should be available.	The application change/maintenance requires some effort and skilled staff to be maintained.	Small effort is required. No special skills needed.	Minimal or no effort is required

Low	Adequate	Sufficient	High
No support or support level is poor	The software support level is average or below average	The software support is more than adequate	The software has a perfect support

Strongly disagree	Partially disagree	Partially agree	Strongly Agree
The software cannot process significantly higher transaction and data volumes.	The software can process significantly higher transaction and data volumes with major modifications only.	The software can process significantly higher transaction and data volumes with simple modifications.	The software can automatically process significantly higher transaction and data volumes.

Application Scoring

Business fit		Weight
Professional suitability	2	30%
Functional coverage	4	15%
Redundancy index	4	15%
Time to market and Functional extensibility	3	15%
Application performance	4	15%
User friendliness	4	10%
Weighted Average	3.25	100%

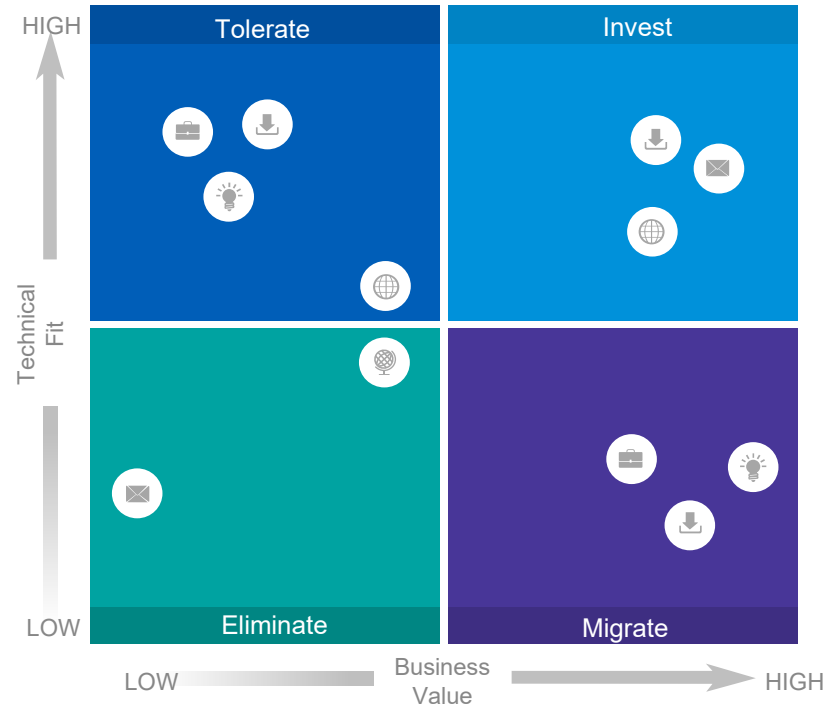
Technical fit		Weight
Availability	4	10%
Technology stack fitness	4	30%
Integration capability	4	20%
Support level	4	10%
Reliability	3	15%
Scalability	3	15%
Weighted Average	3.7	100%

Application rationalization

In the analysis process, the scoring model will generate a listing of recommended dispositions based on foundational data and scoring criteria. The goal of application scoring is to identify redundancies, underperformers, overperformers and those that continue to meet business needs.

Applications in the **TOLERATE** quadrant provide some business value and are a good technology fit within the organization. They have low risk and good service levels. Some of these applications may be on legacy platforms or based on old architectures, but they are still “good enough” to be tolerated by IT.

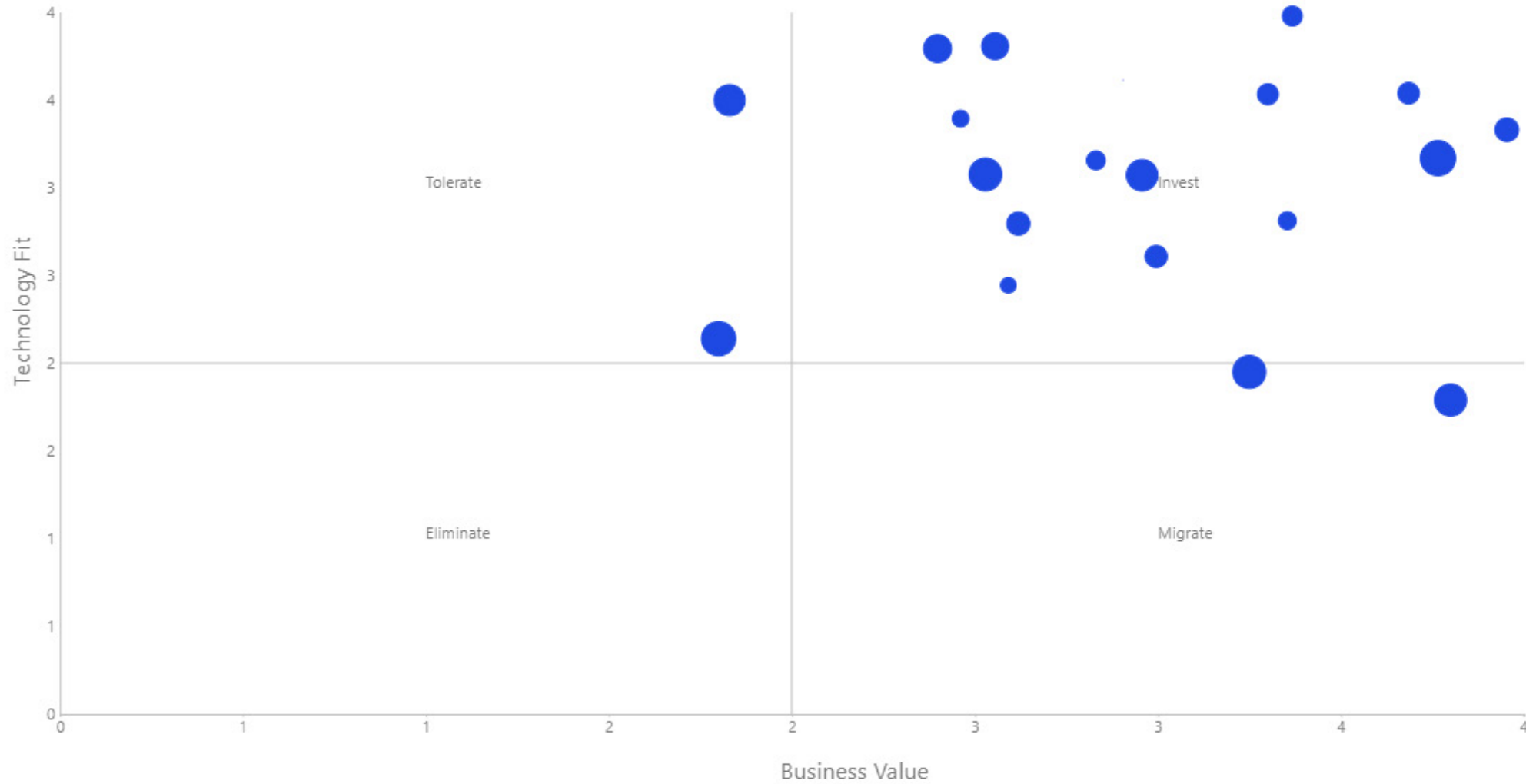
ELIMINATE quadrant holds applications that have low business value and are a poor technology fit. Since these are not business critical and a poor technology fit, it is best to eliminate them



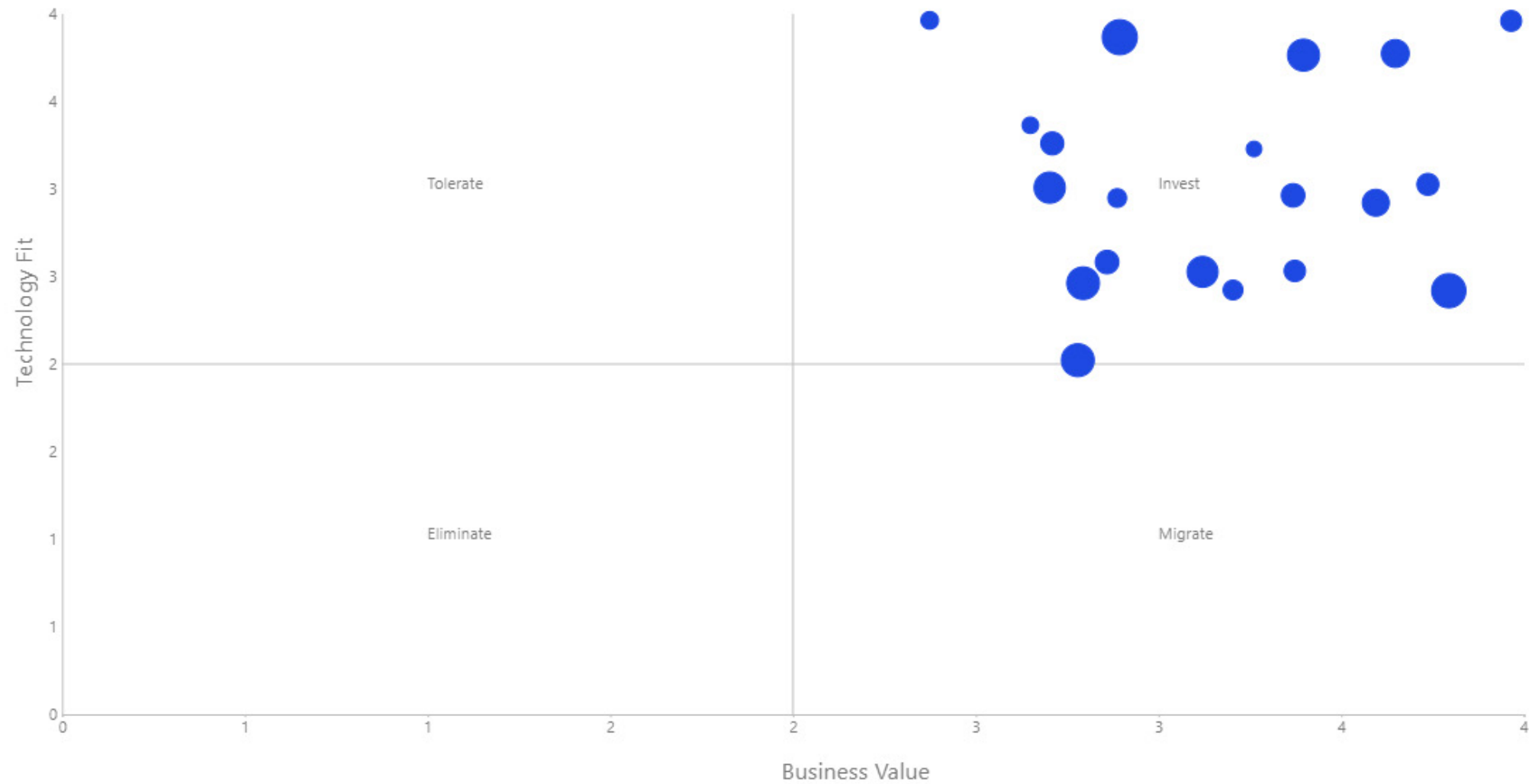
Applications in **INVEST** quadrant provide good business value and are a good technology fit. Applications in this quadrant are "best of breed" applications

MIGRATE, holds applications that provide good business value but are a poor technology fit in the organization. They are critical to functioning of business. But they are a poor technology fit, since they may run on unsupported hardware and software platform.

TIME method – random data sample



Target state – Example



Why (global) APM and TPM

- [Global Quality & Risk Manual: 16.6.4, 17.1](#)
- [Security Standards: Solution Acquisition, Development, & Maintenance](#)

2.1 Scope

The scope of this document includes the acquisition, development and maintenance of solutions and applications by KPMG member firms. Requirements are covering the entire life cycle.

This document applies to technical and procedural aspects of the solution life cycle. This includes the acquisition and development of standalone solutions including for example but not limited to solutions for integrating or interacting with SaaS, PaaS services or for importing data from various sources.

Regulatory and compliance

Risk Manual, Security Standard, OSS licensing, Export Control,...

3.2.1 Requirements for acquired and for developed Solutions

This section applies to both solutions acquired or developed by (or on behalf of) KPMG member firms. More detailed requirements for developed solutions are in section 3.2.2.

1. **Create and maintain an inventory of all technology assets.** An inventory containing all of the member firm's technology assets must be created and maintained.

Links and References:

GISP references: A.8.1.1, A.9.4.5, A.12.7.1

[Security Standard – Vulnerability Management](#)

2. **Define business owner and other stakeholders.** The business owner and other stakeholders must be defined for all solutions.

Links and References:

GISP references: A.8.1.2, A.9.2.5, A.13.1.3, A.14.2.7, A.15.2.1

[Security Standard – Vulnerability Management](#)

3. **Assign information classification to stored or processed information.** The business owner must assign the appropriate information classification level.

Links and References:

GISP references: A.8.1.2, A.8.2.1

[Information Classification Policy](#)

9. Third party components.

- a) Solutions must manage the risk of using third party components. This includes Open Source Software (OSS).
- a) Risks 'inherited' from third party software become risks to the solution and the platform and must be reviewed end to end in the context of the solution. The risks must be treated accordingly.

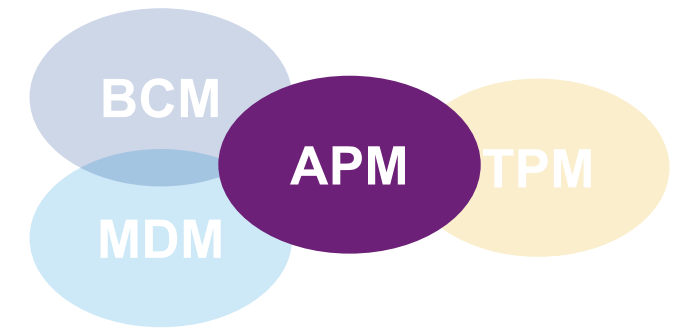
Links and References:

GISP references: A.9.4.5, A.14.2.1, A.14.2.7, A.18.1.2

[Open Source Governance](#)

Application Portfolio Management (APM)

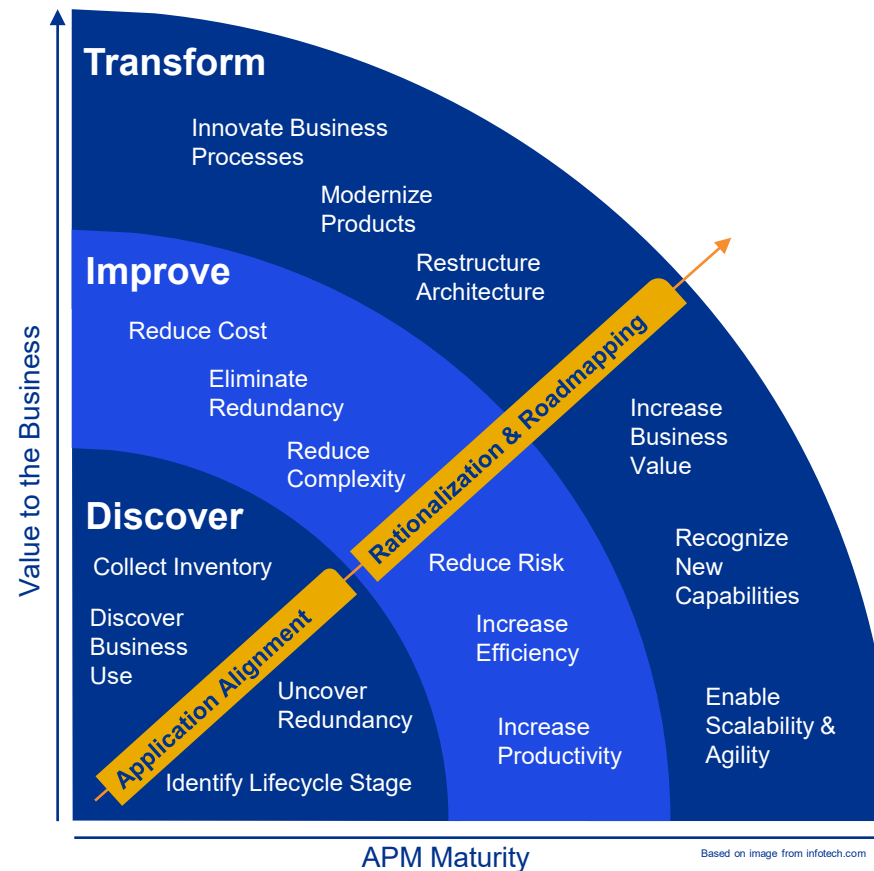
The APM is the foundation for risk, financial and operational management



The APM provides the initial seed data about our applications. This initial seed data then can be leveraged by other departments and tools through integrated and automated processes.

APM activities start before any actual developments or deployments of applications, should be started even before funding is available (Envisioning).

APM data needs to be maintained.

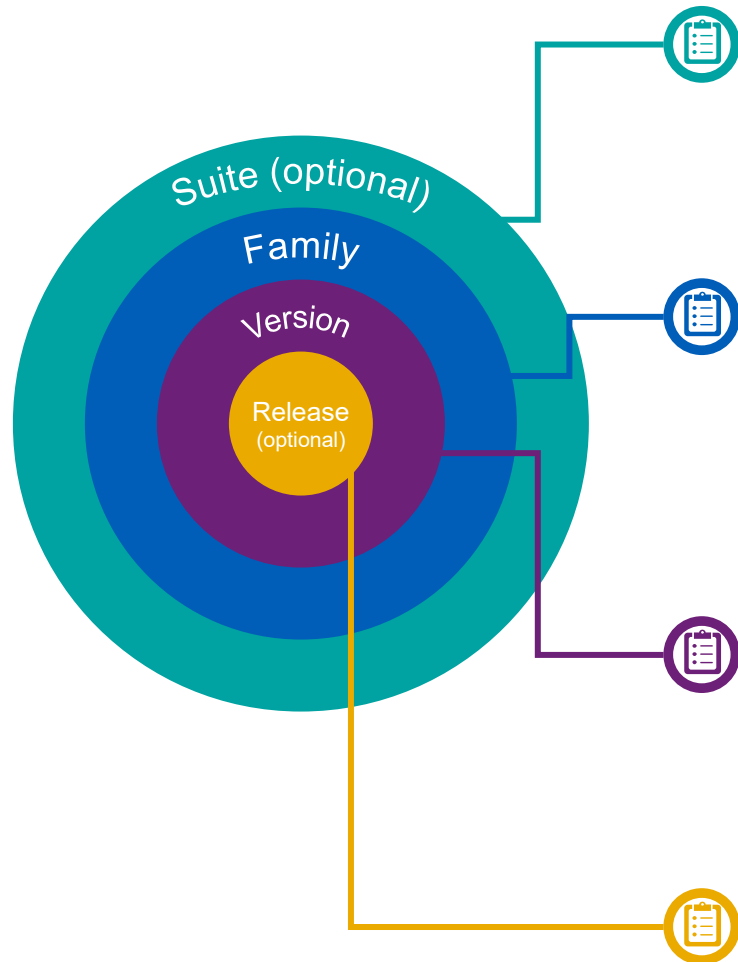


Allows to confidently access information about applications to enable faster and better informed (IT) business decisions and increase opportunities for cost reductions or cost avoidance.

Implemented as a single source of truth and used by many departments (Service Management, Technology Business Management, One Platform, GISG, GSOC,...);

Example: Quickly identify what applications are running on ONE platform

Application Suites, - Families, - Versions, - Releases



Suite: Logical grouping of several Application Families that belong together.

Examples include Global Tax Automation Studio, KPMG Digital Gateway, Source.

- ✓ Just a logical grouping. Optional to use.
- ✓ Primarily for reporting
- ✓ No owner, no Unique ID, ...

Family: KPMG IT Solution that provides support for KPMG (business and IT) processes. Applications are built using technologies*.

Examples include KPMG Digital Gateway – Landing, KPMG Digital Gateway – Workflow, KPMG Link Go Portal

*Technologies are IT Products or services that KPMG has licensed or acquired and are not customized or configured. Commercial or open source software, IaaS, PaaS, SaaS.

- ✓ Has one or more Versions, even for SaaS based applications
- ✓ Has one owner
- ✓ Has one Sponsoring Entity (organization that owns the IP)
- ✓ Has a Unique ID
- ✓ Is not deployable (version(s) are)
- ✓ All versions of a family have the same purpose / share the same basic code base.
- ✓ Family status is derived from all versions
- ✓ Has a BC -, DC - Rating

Version: A distinct major release of an Application.

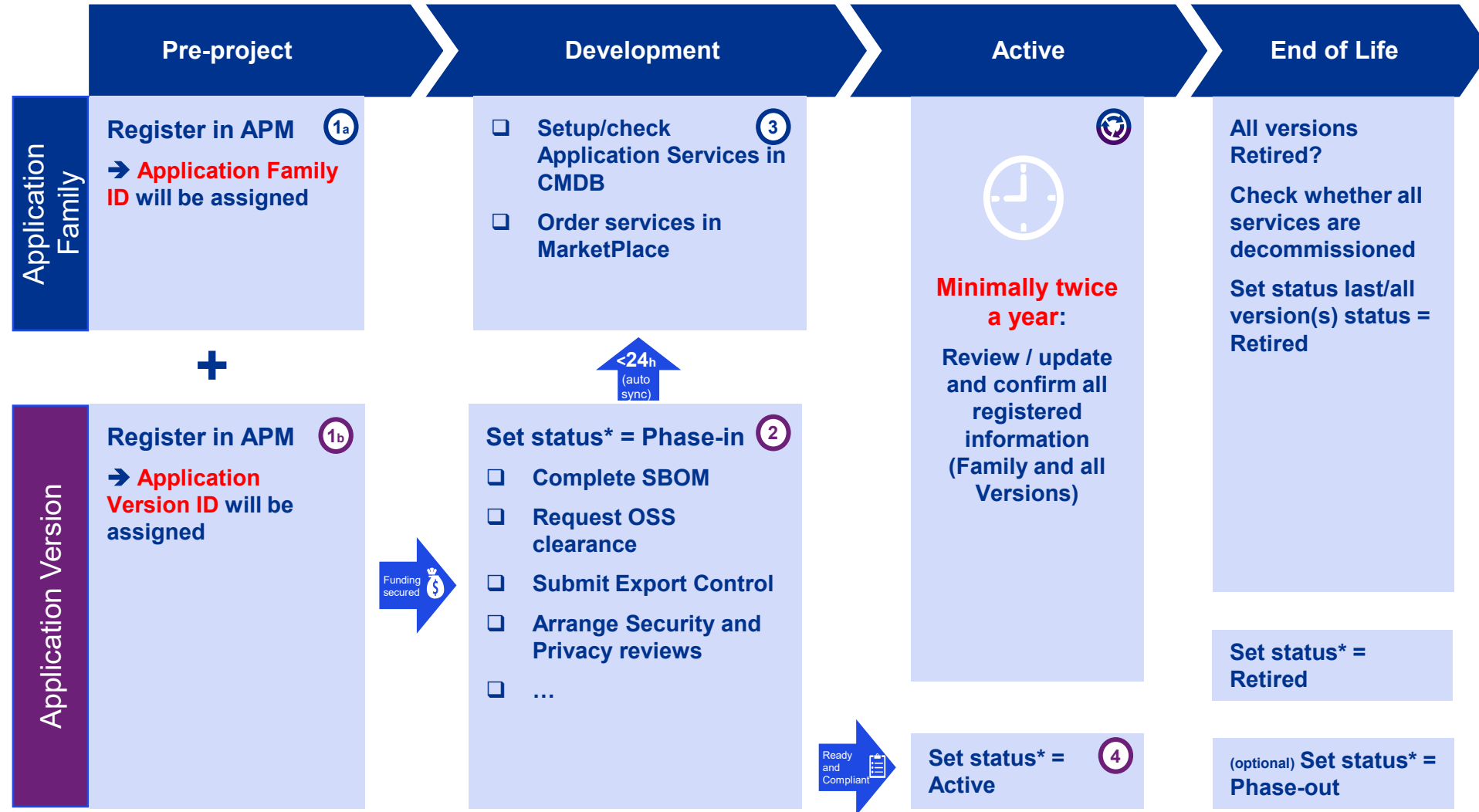
Examples are Global Tax Automation Studio - Data Workflow Central 1.0, Tax Automation Studio - Forms Recognizer 1.0

- ✓ Has the same name as the family plus a version indicator (e.g. 2.1 or FY22.3)
- ✓ Has a Unique ID
- ✓ Subject to Export Control, SAR, ATO, etc.
- ✓ Is deployable (actual deployments are in the CMDB)
- ✓ Has a status and lifecycle
- ✓ Has specific commercial or open source software, IaaS, PaaS, SaaS components.

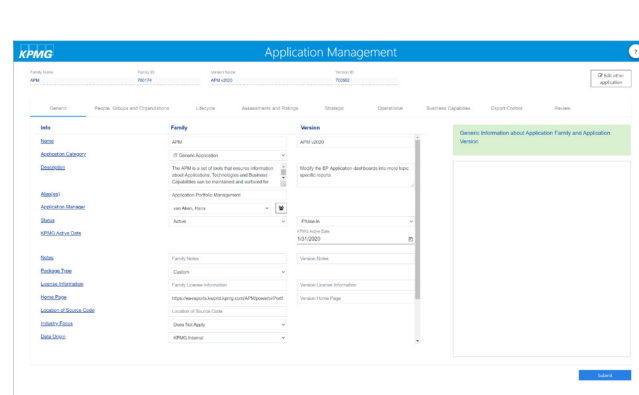
Release: A distinct hotfix/patch release of an application version

- ✓ Optional to use
- ✓ Has the same name as the version plus a release indicator (e.g. 2.1.3 or FY22.3.2)
- ✓ Associated with the actual (DevOps) build number
- ✓ Conditionally exempt from full vetting

Application Registration and Lifecycle

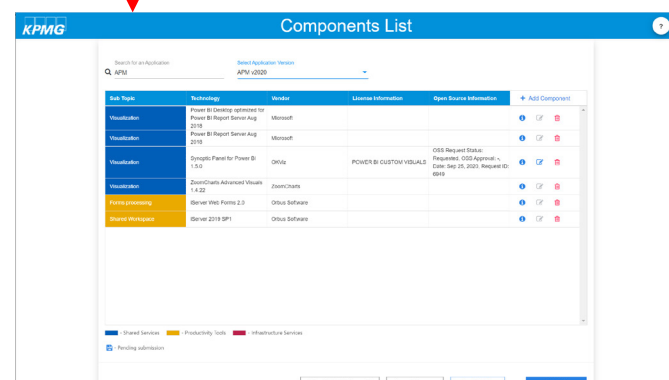
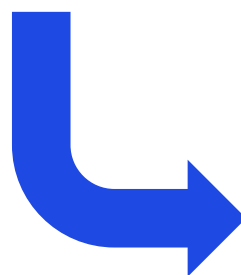


Overview

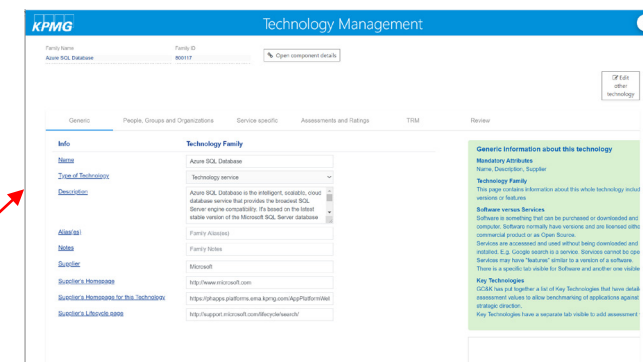
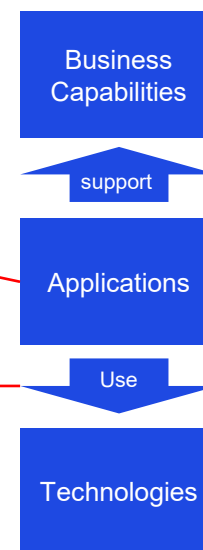


Application Portfolio Management

- Families
- Versions
- People
- Ratings
- Export Control
- Lifecycle
- ...

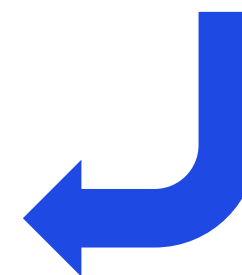


What Application is using what Technologies (as components)



Technology Portfolio Management

- Software
- Services
- Vendors
- Licenses
- Roadmaps
- ECCN
- ...



APM inputs and outputs

An effective application portfolio management process ensures that the entire application lifecycle from acquire to retire follows a defined process to benefit the organization

Business Management



IT Management

