

DG@VOLVO PENTA

**Data governance- en gemensam
struktur skapar en stabil grund
för framtiden**



Valentina Niklasson

@Volvo Penta

*Data Governance Lead and
Business Architect at Digital & IT*

"I have never done it before so I can do it"

Professional back-ground

- *Over 30 years of experience working within big automotive industries such as SKF and Volvo Penta.*
- *Holding various roles within product quality, lean, and project management that have given me a solid platform of knowledge*
- *Serving as a bridge into our future demands in new areas such as digitalization, electrification, creating services etc. focusing on master data and information management.*
- *I have expertise in business information architecture, data governance, and data quality.*
- *I am dedicated to driving continuous improvement and delivering high-quality solutions for our customers.*

OUR VISION

To become the world leader in
sustainable power solutions

HOW TO GET THERE

FOUR FOCUS AREAS FOR FUTURE PROSPERITY

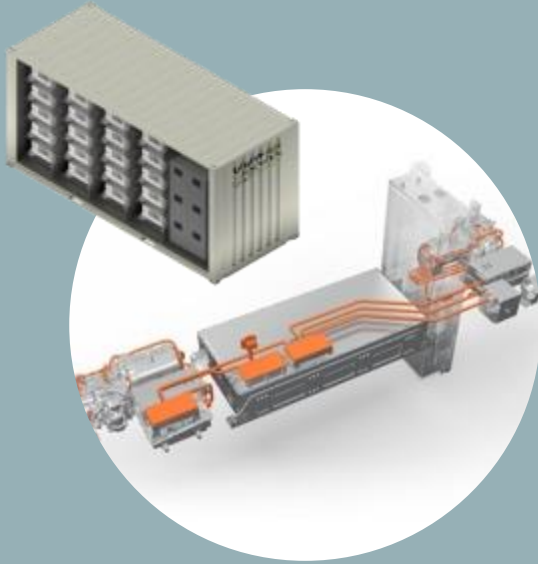
**CUSTOMER
SUCCESS**

SUSTAINABILITY

**BUSINESS
GROWTH**

PEOPLE

Three paths to fossil-free



Battery Electric & Hybrids

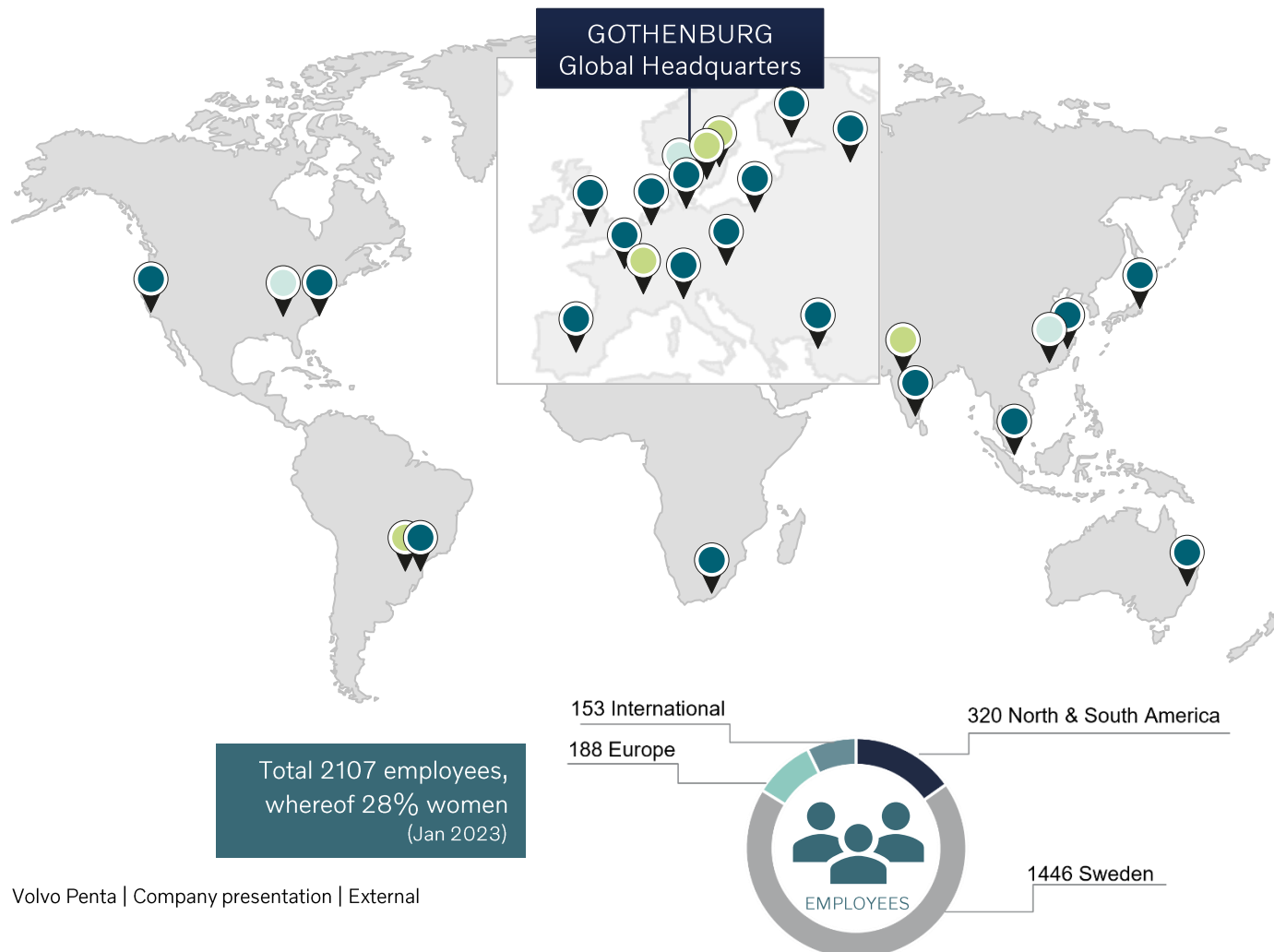


Alternative Fuels



Fuel Cells

Volvo Penta in the World



VOLVO PENTA SALES OPERATIONS

- Vancouver
- Beesd
- Johannesburg
- Chesapeake
- Milan
- Tokyo
- Curitiba
- Istanbul
- Shanghai
- Warwick
- Helsinki
- Bangalore
- Paris
- St Petersburg
- Singapore
- Madrid
- Gdynia
- Brisbane
- Kiel
- Vienna

VOLVO PENTA PRODUCTION

- | | |
|-----------|----------------------------------|
| Lexington | Industrial diesel engines |
| | Marine gasoline engines |
| Vara | Marine diesel engines |
| | industrial electric drivelines |
| Lingang | Industrial/marine diesel engines |

GROUP TRUCKS PRODUCTION

- | | |
|-----------|---------------------------|
| Köping | Marine drive units |
| Lyon | Industrial/Marine engines |
| Skövde | Industrial/Marine engines |
| Curitiba | Industrial engines |
| Pithampur | Industrial engines |

Everything we do is with people and planet in mind. Always striving for total control, comfort, and safety – we deliver sustainable, innovative, and integrated power solutions to our customers across the globe. At your service, in service of the ocean.

At sea

SPECIALIZED BUSINESS UNITS FOR A UNIQUE CUSTOMER EXPERIENCE

On land

Powerful industrial solutions and partnerships are key for us. From optimizing your application to our global network of dealers, we're here to assist you. And with the shared technology of the entire Volvo Group, our innovations will lead you into the future of industrial power systems.



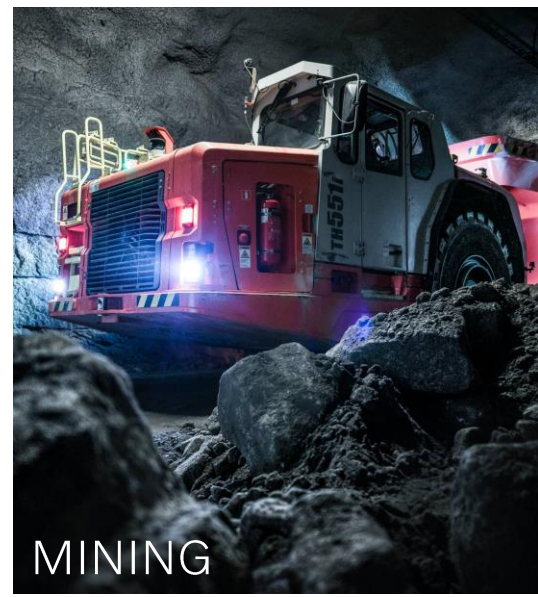
FORESTRY



MATERIAL HANDLING



POWER GENERATION



MINING



SPECIAL VEHICLES



AGRICULTURE



CONSTRUCTION

THE JOURNEY TO NET ZERO



Electric terminal tractor in partnership
with TICO, US



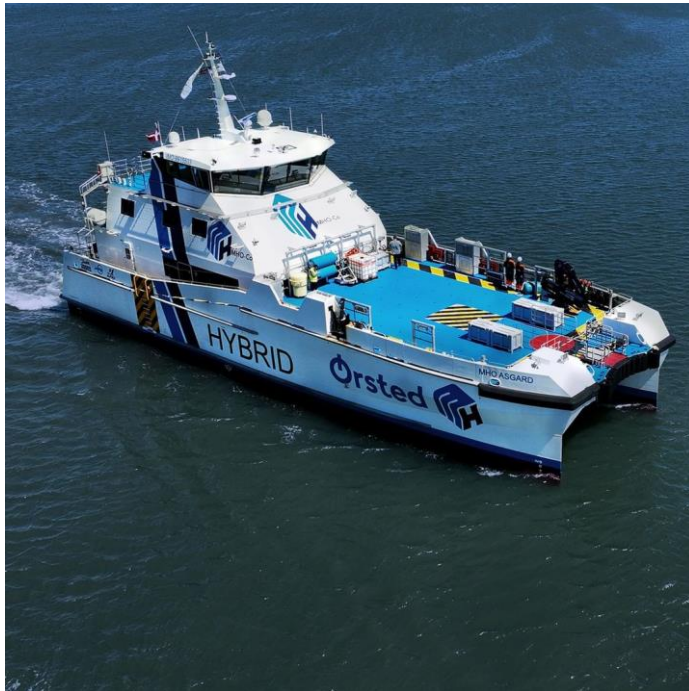
600 V electric driveline to Rosenbauer's
electric city fire truck



Dual fuel (hydrogen/diesel) solution for
combustion engine in partnership with
CMB.Tech



NAVIGATING TOWARDS NET ZERO



Hybrid Crew Transfer Vessel developed together with Danfoss Editron



Low-carbon dual-fuel hydrogen technology for both on land and at sea applications in collaboration with CMB.Tech



Together with Hurtigruten Svalbard, Volvo Penta is piloting marine electromobility in the harsh and fragile environment of the Arctic.

At Penta, data is leveraged to create value, in order to drive success for our customers, achieve sustainability, realize business growth, and increase engagement of our people.

Data is treated as a company wide asset, helping us to reach our strategic targets and realizing our vision while being fully compliant.

We change to win.

DATA GOVERNANCE @ VOLVO PENTA

- 1. INTRO**
- 2. BACKGROUND - WHY ?**
- 3. THE JOURNEY - WHAT ? HOW ? WHO ?**
- 4. DATA GOVERNANCE OPERATING MODEL**
- 5. USE CASE: BP DATA GOVERNANCE SET UP AND USE OF BIM**
- 6. KEY TO VP SUCCESS.....OR SOME OF THEM**

- Organizational Silos
 - Local IT nonstandard solutions
 - Local "Language", i.e., different vocabularies

IT Projects

IT Projects

IT Projects

IT Projects

Enterprise Architecture



DVP



MAS



PRD



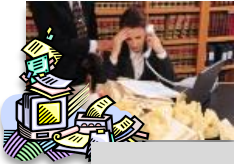
DCL

The Journey

2010	2011	2012	2013	2014	2015	2016	2017	2018 ...
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Establishment

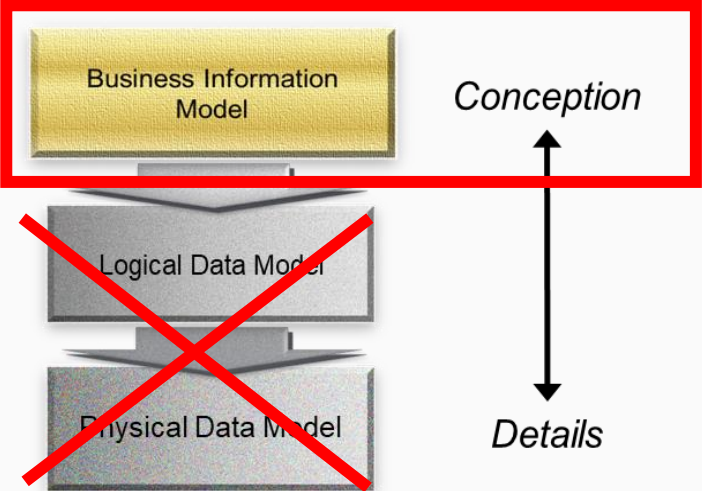
Industrialization & Deployment



Master Data Workshops with Business Representatives



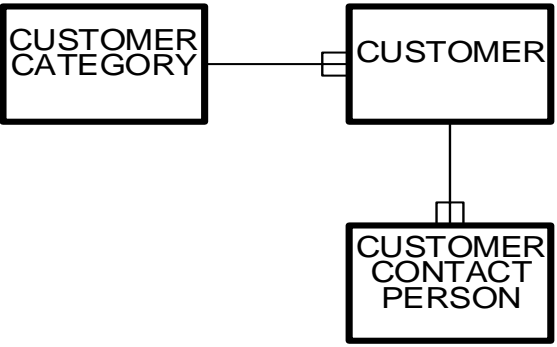
Business semantics & structures



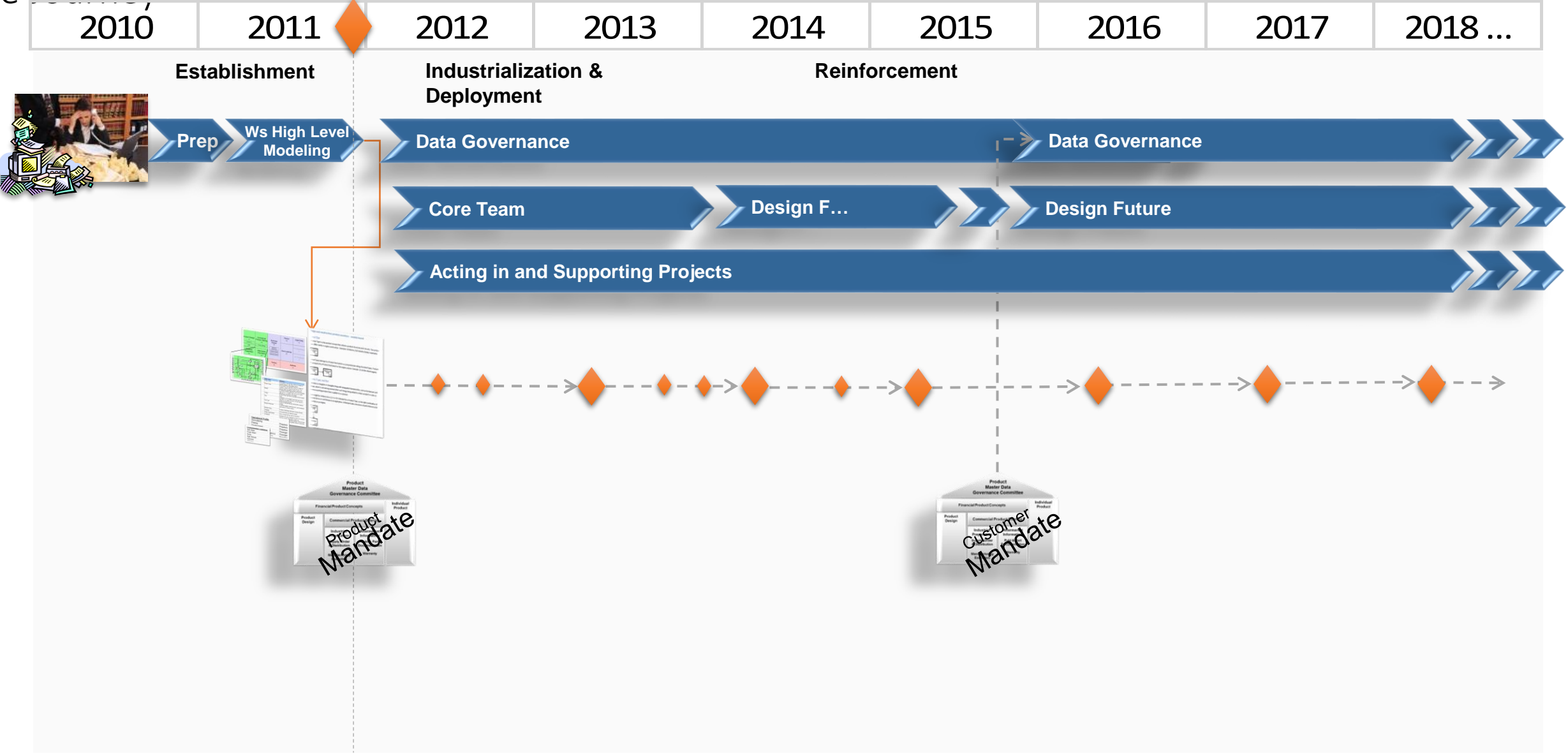
Conception

Details

Easy to understand Graphics



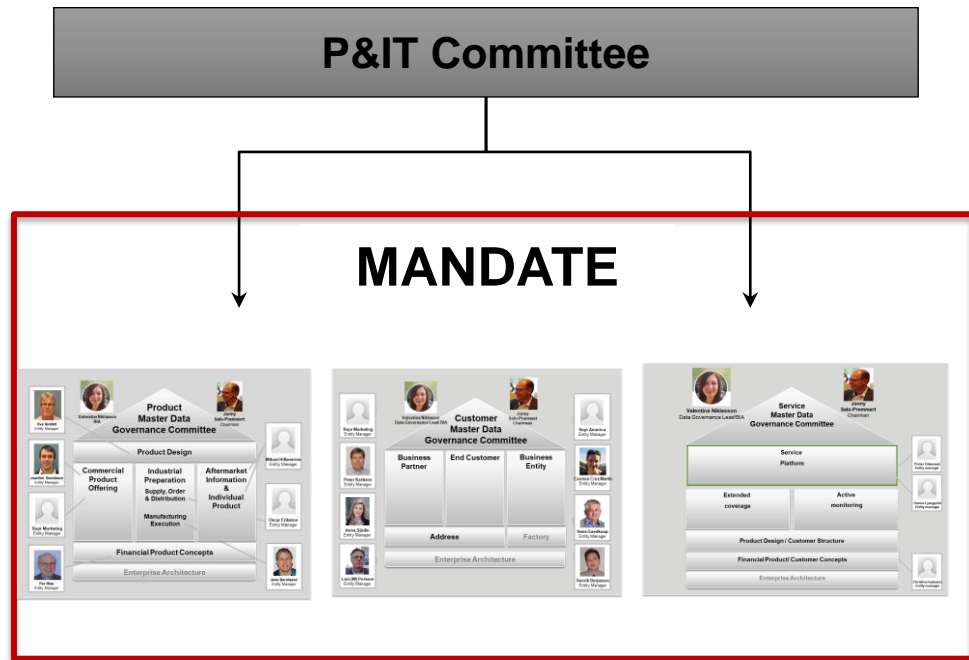
The Journey



Volvo Penta Master Data Governance

A Non-Invasive Approach

- Empowered Entity Managers
- Sponsorship
- Mandate
 - Mandate from Top Management
- Top Management Decision
 - All IT Projects shall have a Business Information Model aligned with the Master Data Model before opening the CSG gate

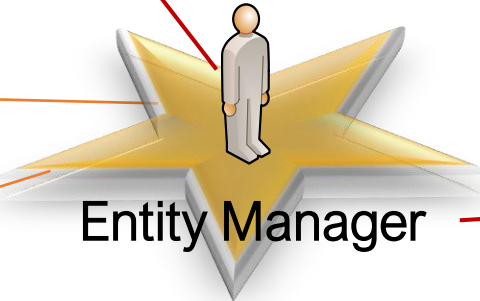


Information Owner

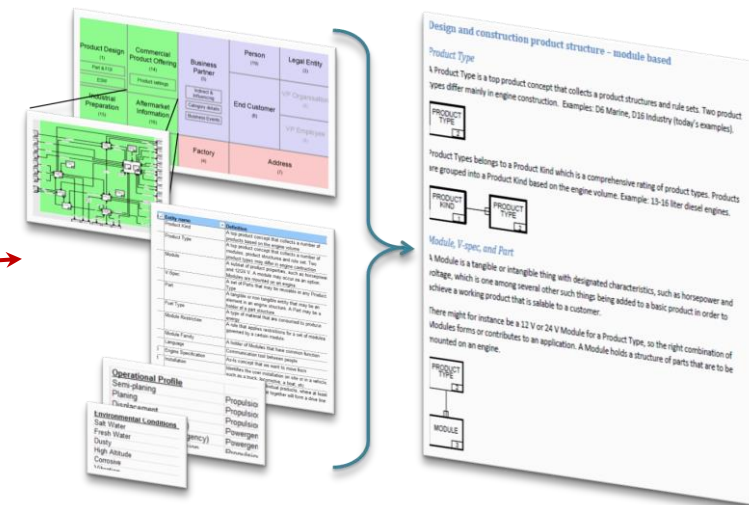


Data Stewards

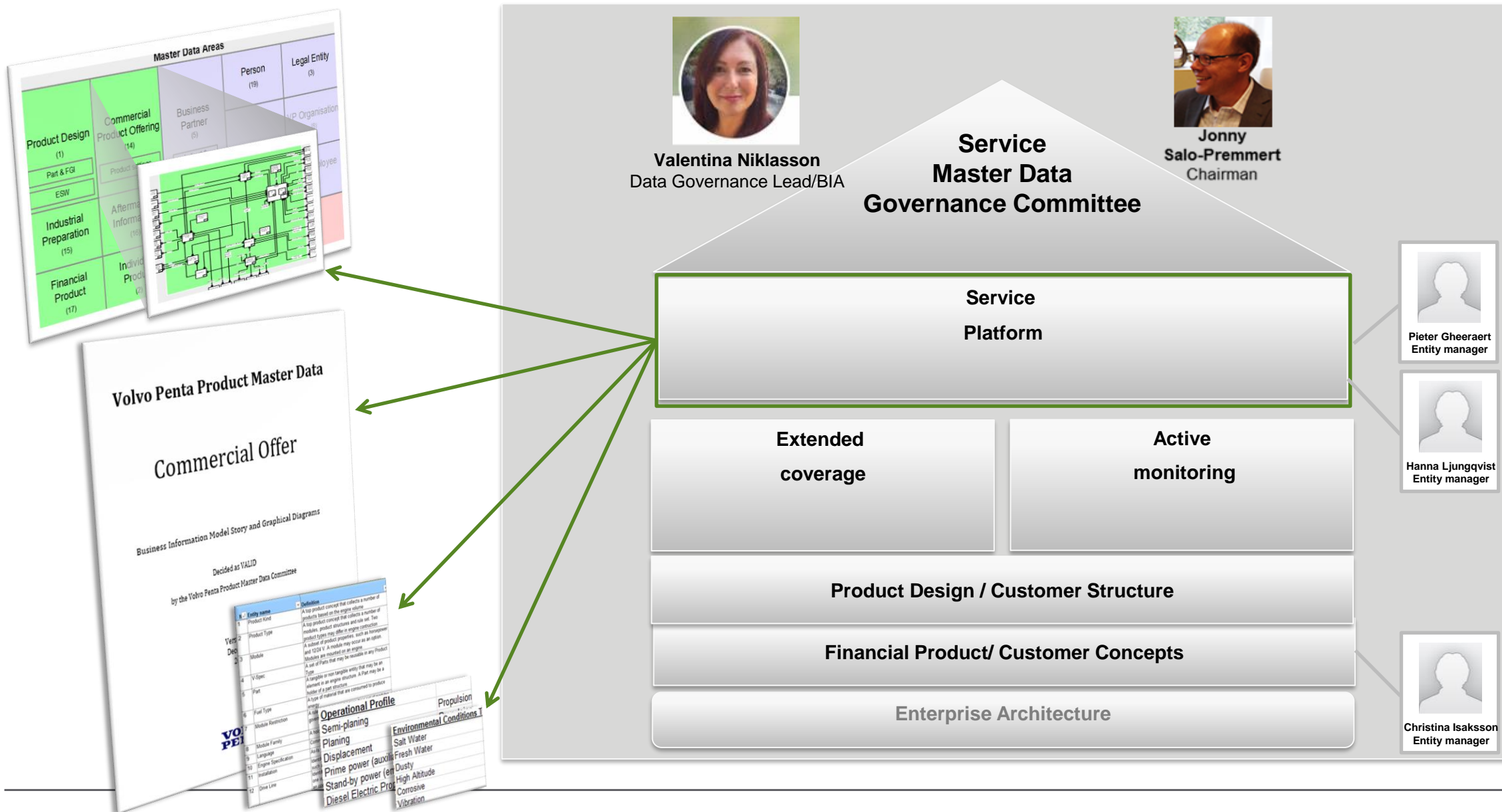
Entity Manager



Forms definitions,
standards and data
capture processes

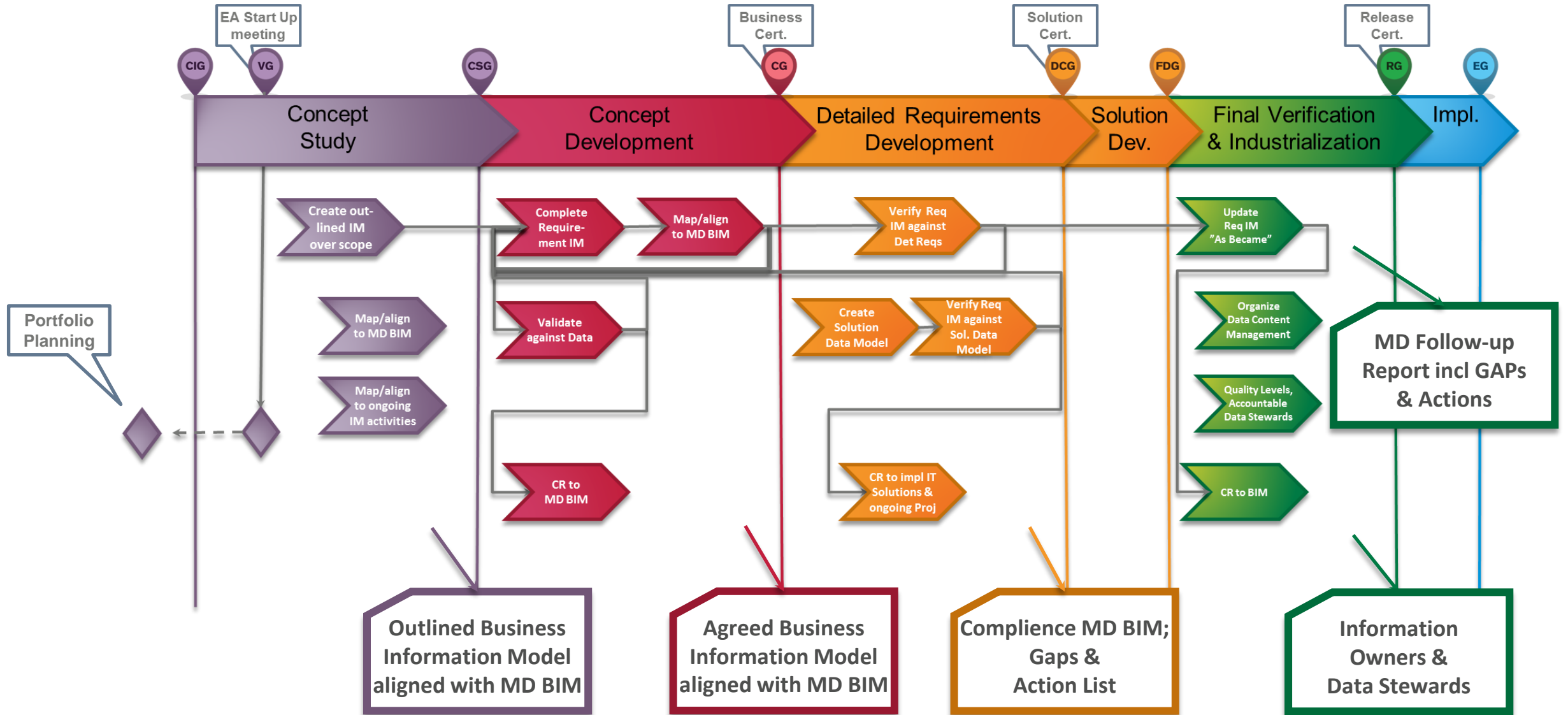


Service Master Data Governance

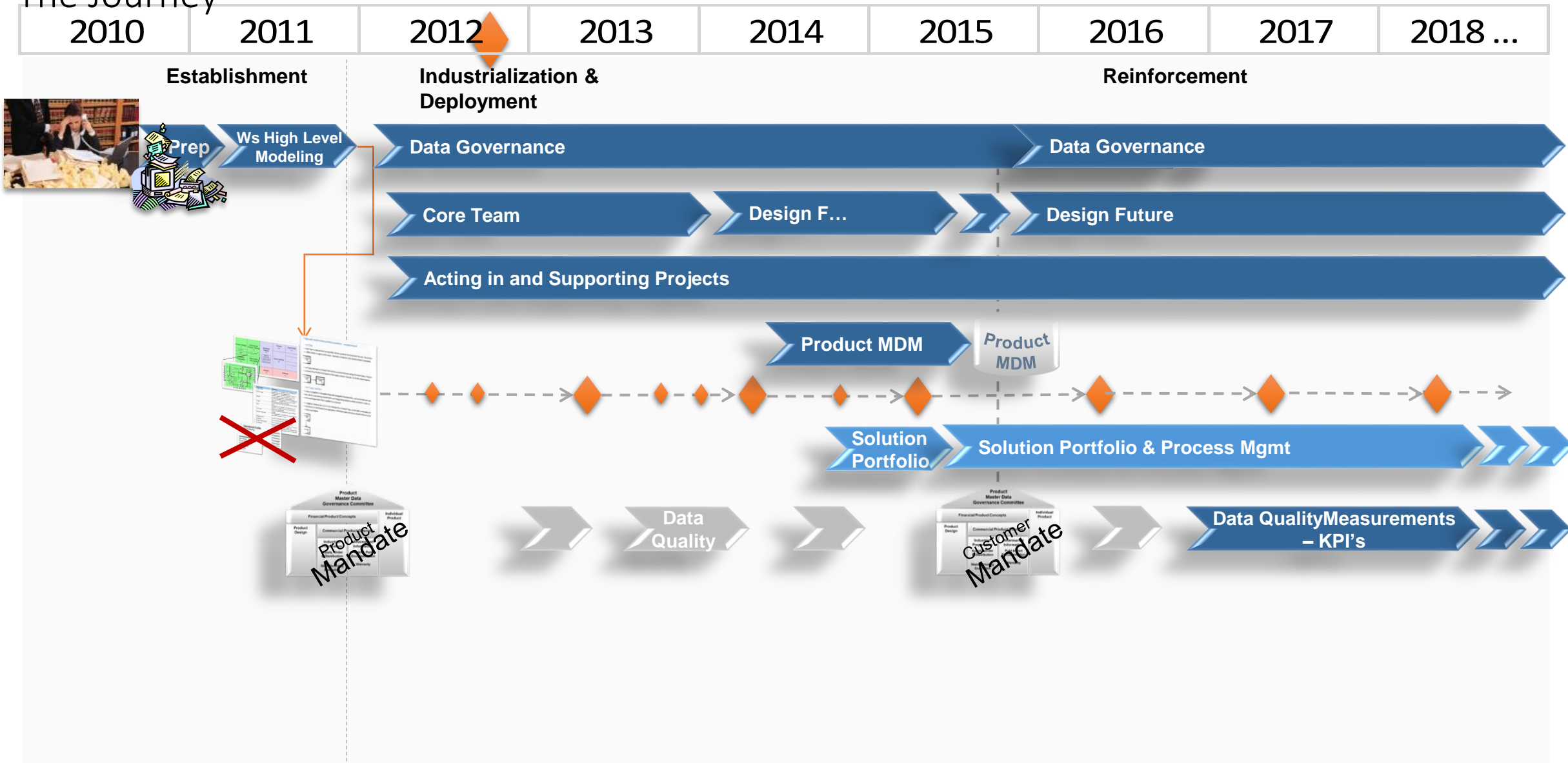


Cooperation with IT Project Portfolio Management

- Project Support Process



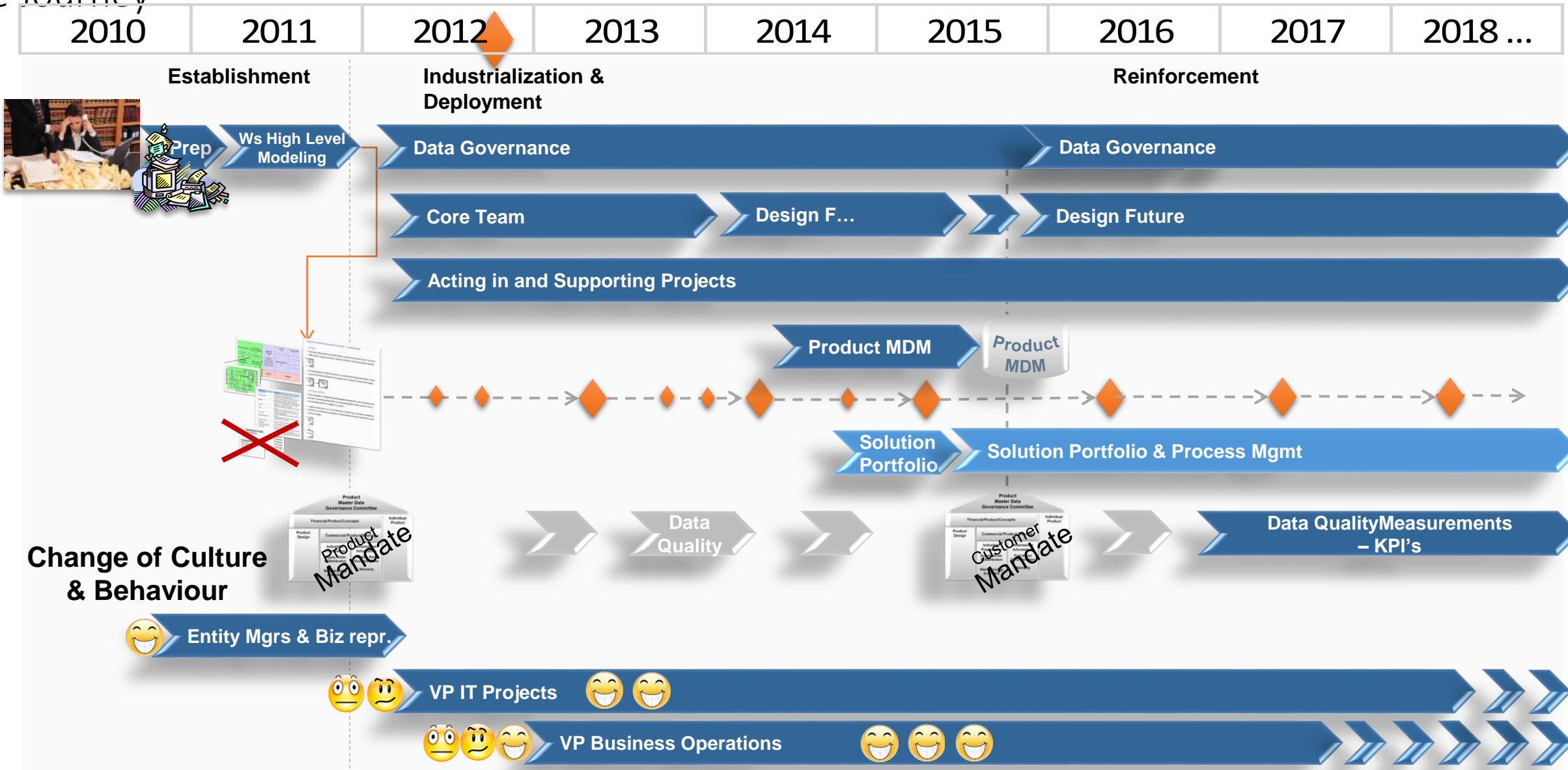
The Journey



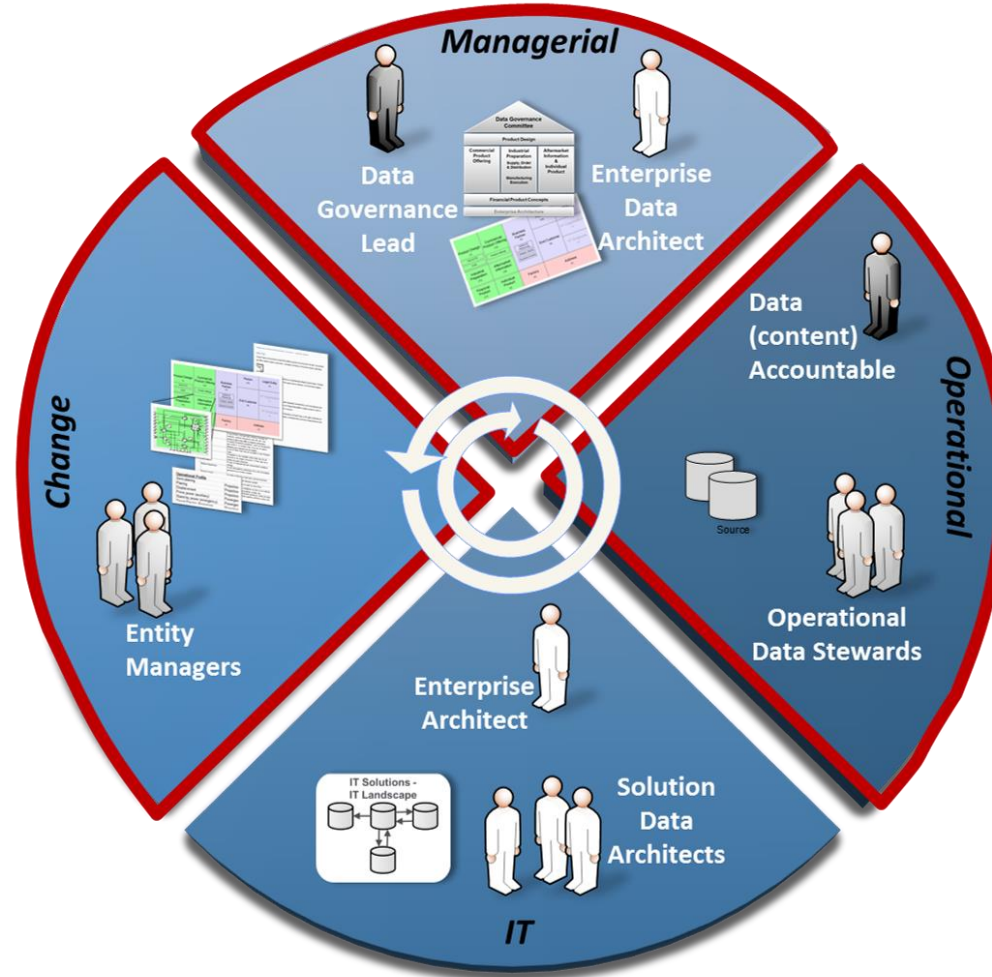
Metrics received after audit exposition



The Journey



VP DATA GOV. OPERATING MODEL



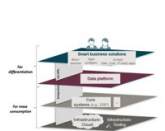
Volvo Penta's data journey is based on three key building blocks

In alignment with Volvo Group Digital & IT Strategic Vision

VOLVO PENTA

Data Platform

The **Unified Data Platform (UDP)** is intended for any **Data & Analytics purpose** and is **open to everyone** in Volvo Group



UDP is the corporate Data Management and Analytics platform for the Volvo group.

UDP supports different consumption methods from Business Intelligence to Advanced Analytics with Machine Learning and AI, from Smart Business Solutions to Core Transaction system and external users.

It's open to all users working in Volvo group that would like to get easy access to Volvo Group Data.

Volvo Group

2023-01-04 16

Data Platform

VOLVO PENTA

Data Governance & Management

Data Governance & Management has clear and concrete benefits

	From...	To...	Example:
Accountability	Unclear data responsibilities	Clear mandate across Volvo Group to govern data	Distinct roles responsible for e.g., ensuring correct parts weight data across VG
Compliance & security	Inefficient compliance adherence	Well-defined compliance processes leveraging automation & new tech	Efficient process to handle data sharing agreements with business partners
Availability	Long lead time to access data	Data usage approved by default with exceptions (GDPR, confidential)	Access process ensuring a few hours to access data when creating a new digital truck insurance model
Quality	Insufficient data quality for business processes	Quality assured data accessed from a single source of truth	VG-wide customer master data with clear hierarchies & up to date billing info

Volvo Group

Focus of MVP1: customers with own workshop, i.e., mostly large customers

Data Governance & Management

VOLVO PENTA

Data Product Development

Data Products are an effective and compliant way of making data available

DATA PRODUCT*

Reusable, pre-packaged set of data

Quality assured & optimized for ease of use

Published, shared & easily accessible in data marketplace

Compliant with Security & Privacy and... Valuable for the business

From

Data as a by-product

Same data loaded multiple times

Hard to find, unknown and scattered data

Long lead-times

Re-do data cleansing & preparation every time

To

Data as a core product

Data used by multiple consumers

Easily discoverable data

Simplified access

Ready to use and pre-packaged data

* Data Product definition is yet to be finalized

Data Product Development

Our strategy

VOLVO PENTA



- Data has ownership
- Data is well defined and modelled
- Data has a master version
- Data quality is ensured
- Data is accessible and shared



OUTCOMES

- Increased efficiencies
- Reduction of manual work
- Better decision making
- Deeper insight through data as a asset

Priorities 2023



Data
ownership



Data
quality



Data
Governance



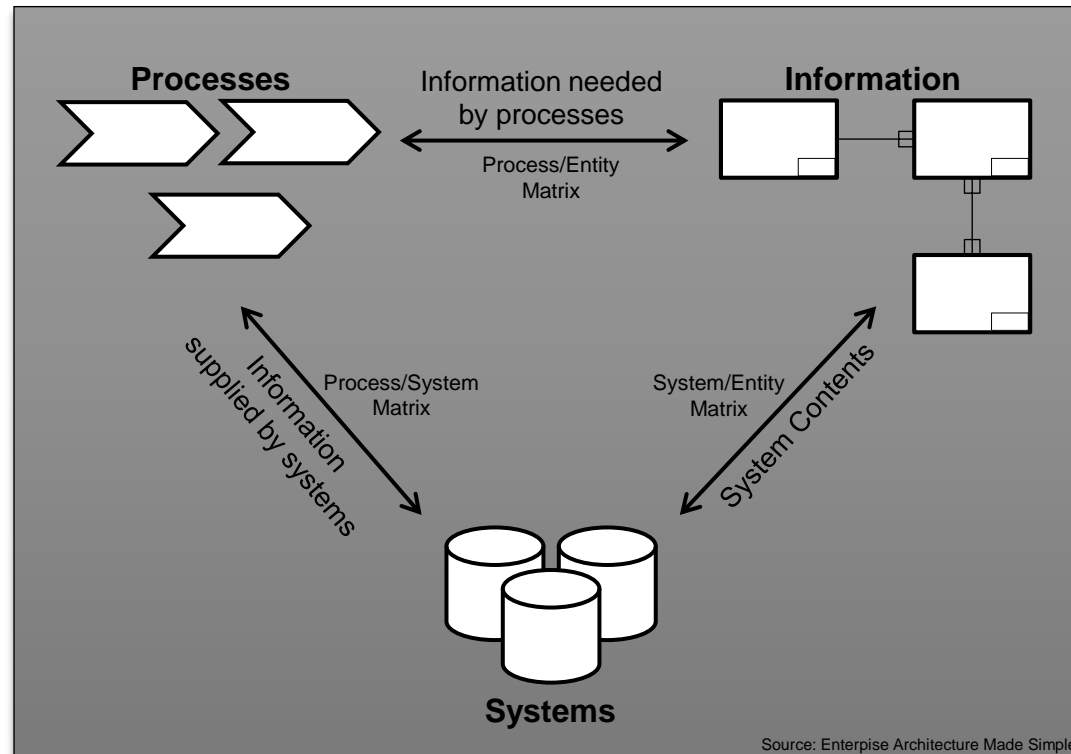
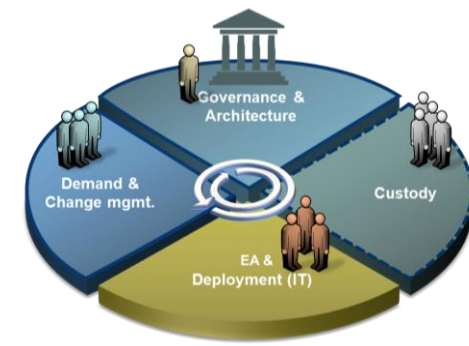
Data
management



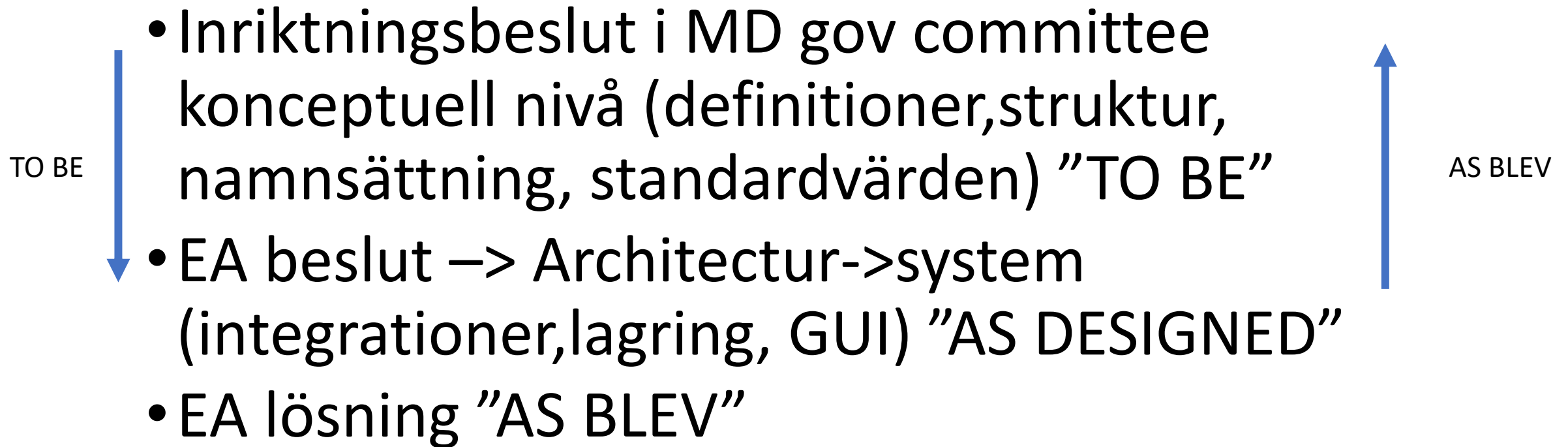
Data
literacy

Challenges – “Coming Together”

- To be **synchronized with EA, the Portfolios and the Processes**
 - The BIA participates in the Process Workshops
 - Coordinated work around Business Capabilities etc



Beslutsprocess för samsyn genom hela företaget från konceptuell nivå till färdig lösning

- 
- The diagram illustrates a decision-making process. On the left, a blue arrow points downwards from the text 'TO BE'. On the right, a blue arrow points upwards towards the text 'AS BLEV'. The central text consists of three bullet points describing the stages of the process.
- Inriktningsbeslut i MD gov committee
konceptuell nivå (definitioner, struktur,
namnsättning, standardvärden) "TO BE"
 - EA beslut → Architectur->system
(integrationer, lagring, GUI) "AS DESIGNED"
 - EA lösning "AS BLEV"

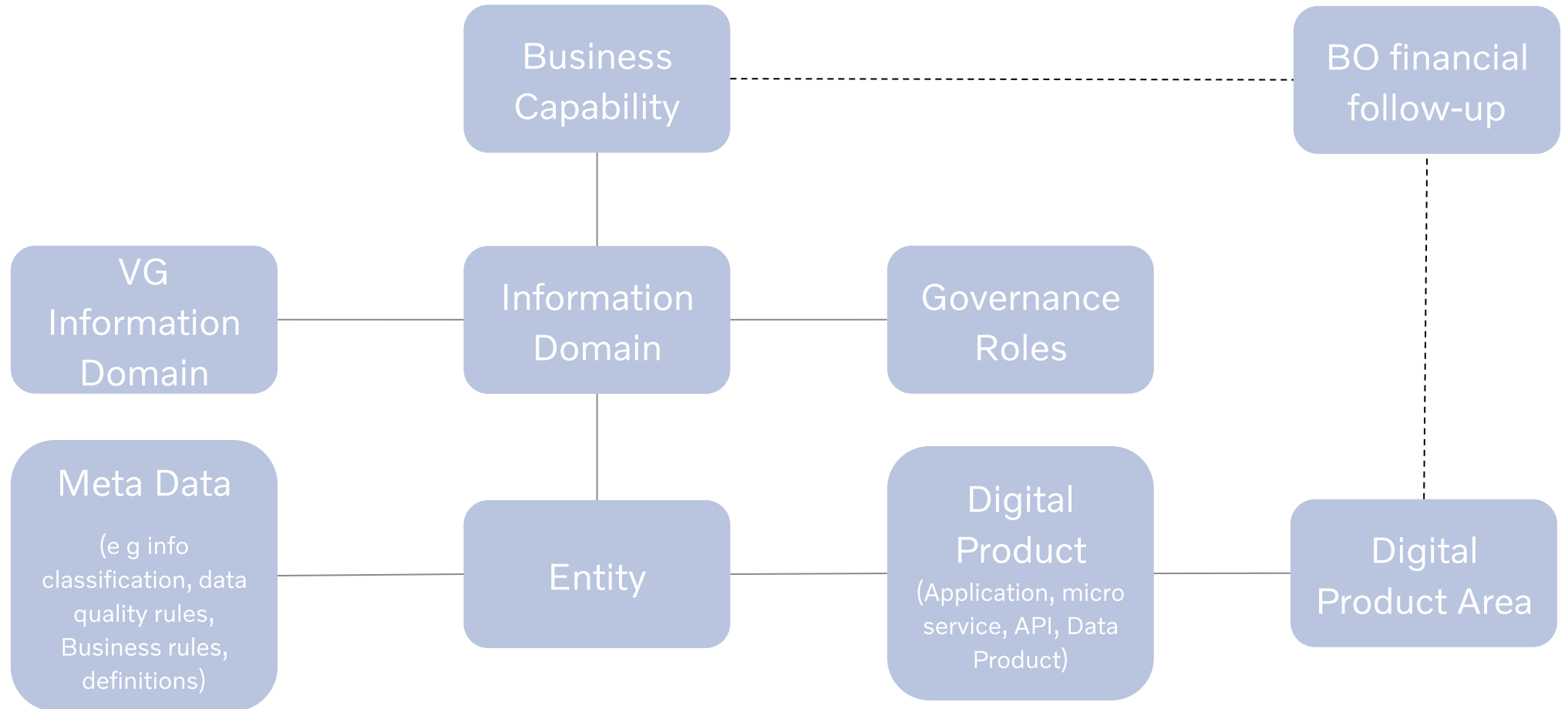
Hur Bygga en gemensam kultur och skapa engagemang

- Faciliterar workshops för skapande av BIM ihop med verksamheten ock arkitekter
- tbc

Få med verksamheten och få ägarskap för vår information genom workshops med arkitekter och verksamhetsfolk redan under idefasen i innovationsprocessen

- Data utan information är oandvändbar,
- Information modeller med model stories som bro mellan affärsmodeller till en kravbild för framtida lösningar

VP data driven set-up





- OEM's
- Dealers
- End users
- Fleet owners



- TGW
- Easy connect
- API's
- Other



- Uptime
- Productivity
- Experience

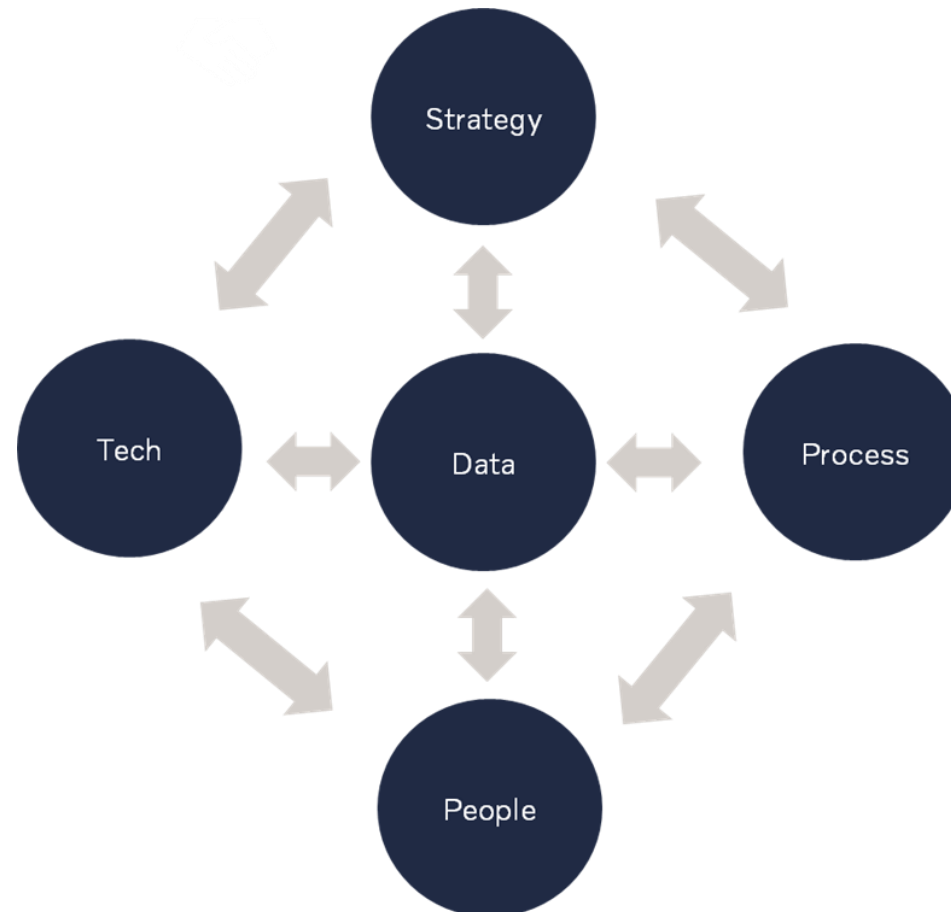


It's all about connecting the dots

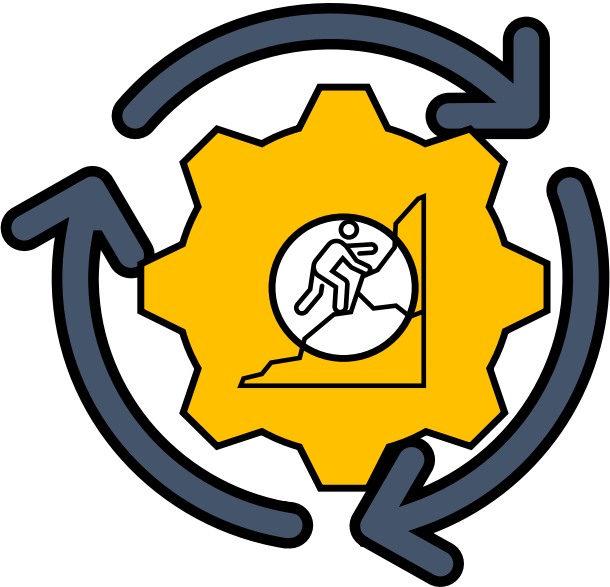
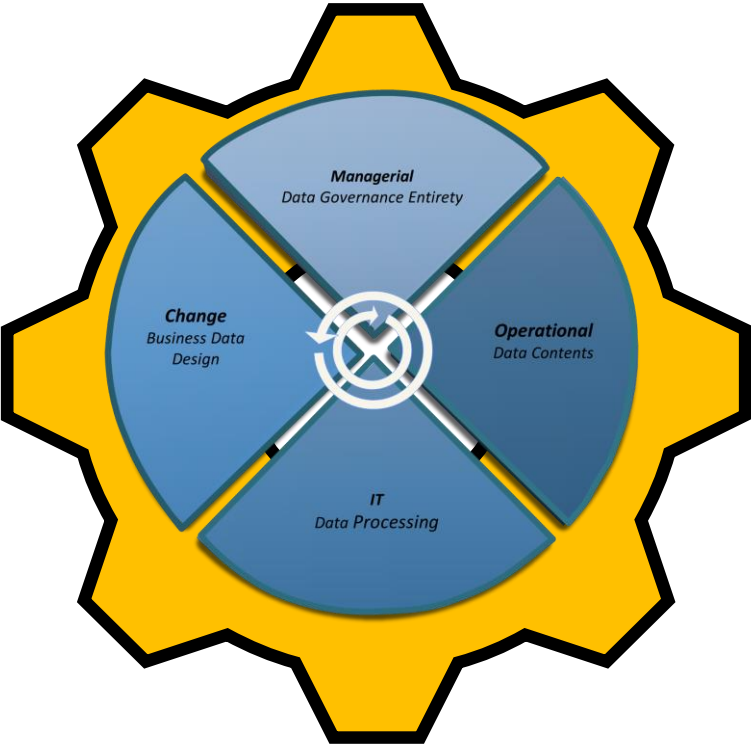
“Don't talk about engine types; talk about features and what we can do for our customers”

It's all about connecting the dots.....

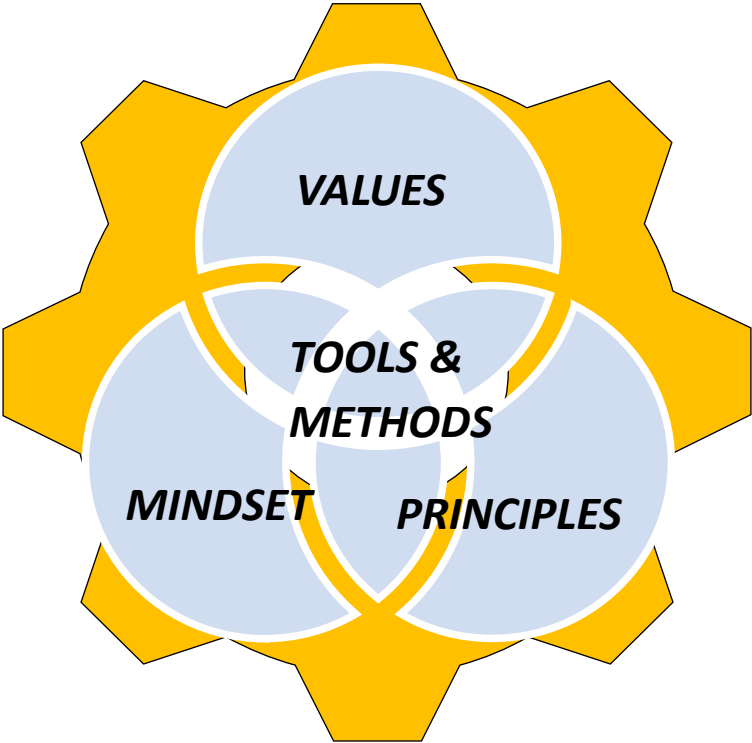
BUSINESS STRATEGY ↔ DATA STRATEGY ↔ DIGITALIZATION STRATEGY



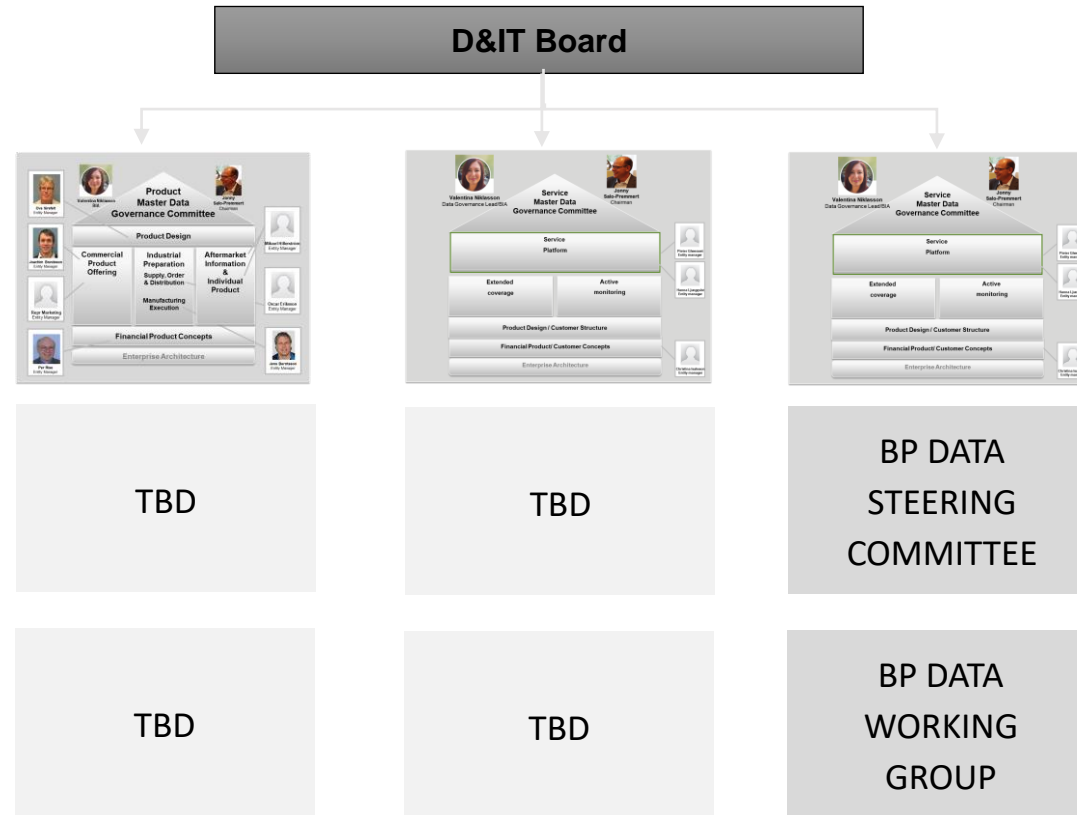
DIGITALIZATION STRATEGY ↔ DATA STRATEGY ↔ BUSINESS STRATEGY



Start small think big



VOLVO PENTA



Entity managers (BR)

Data Governance Lead (D&IT R)

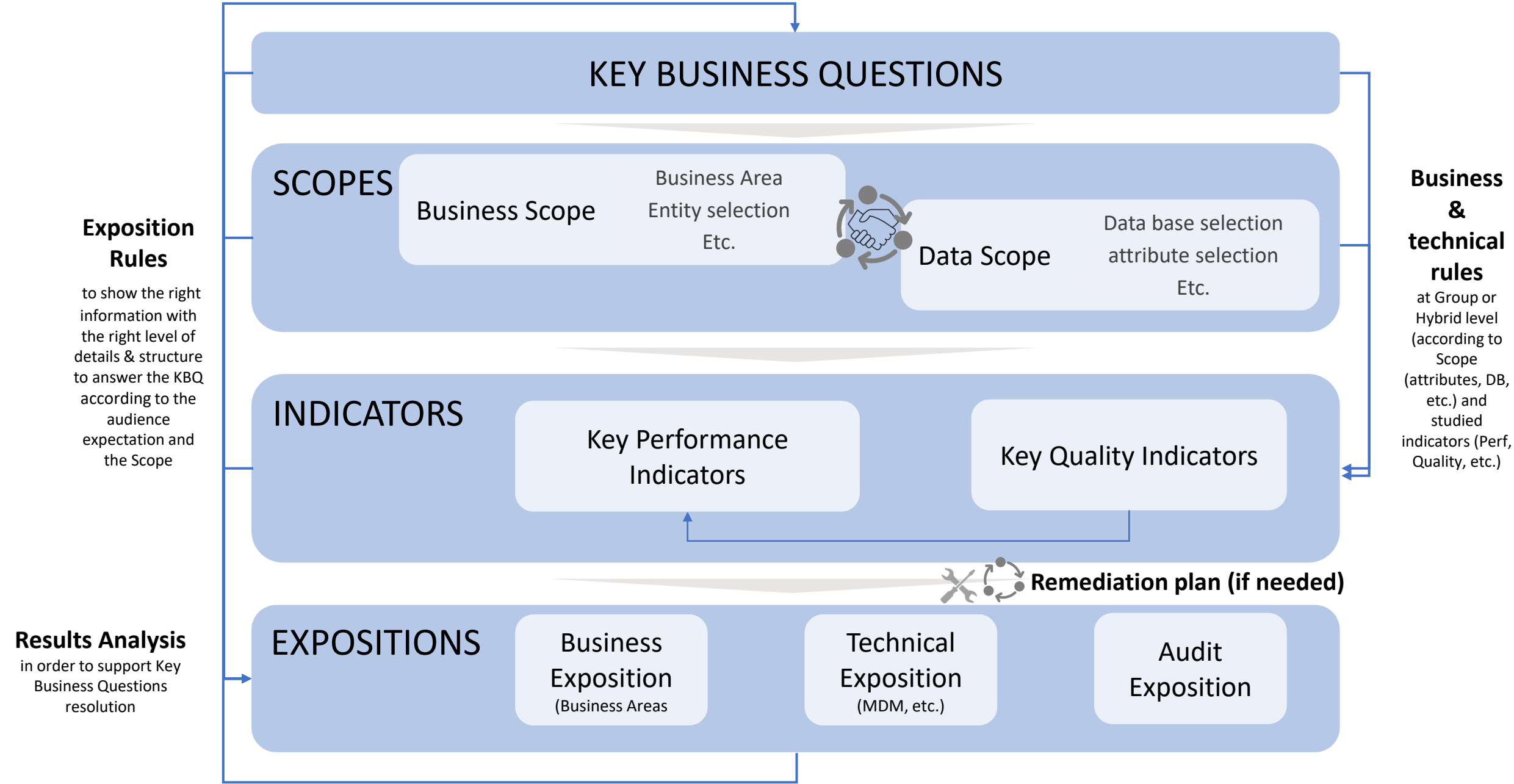
Information Owner (BR)

Information Owner (BR)

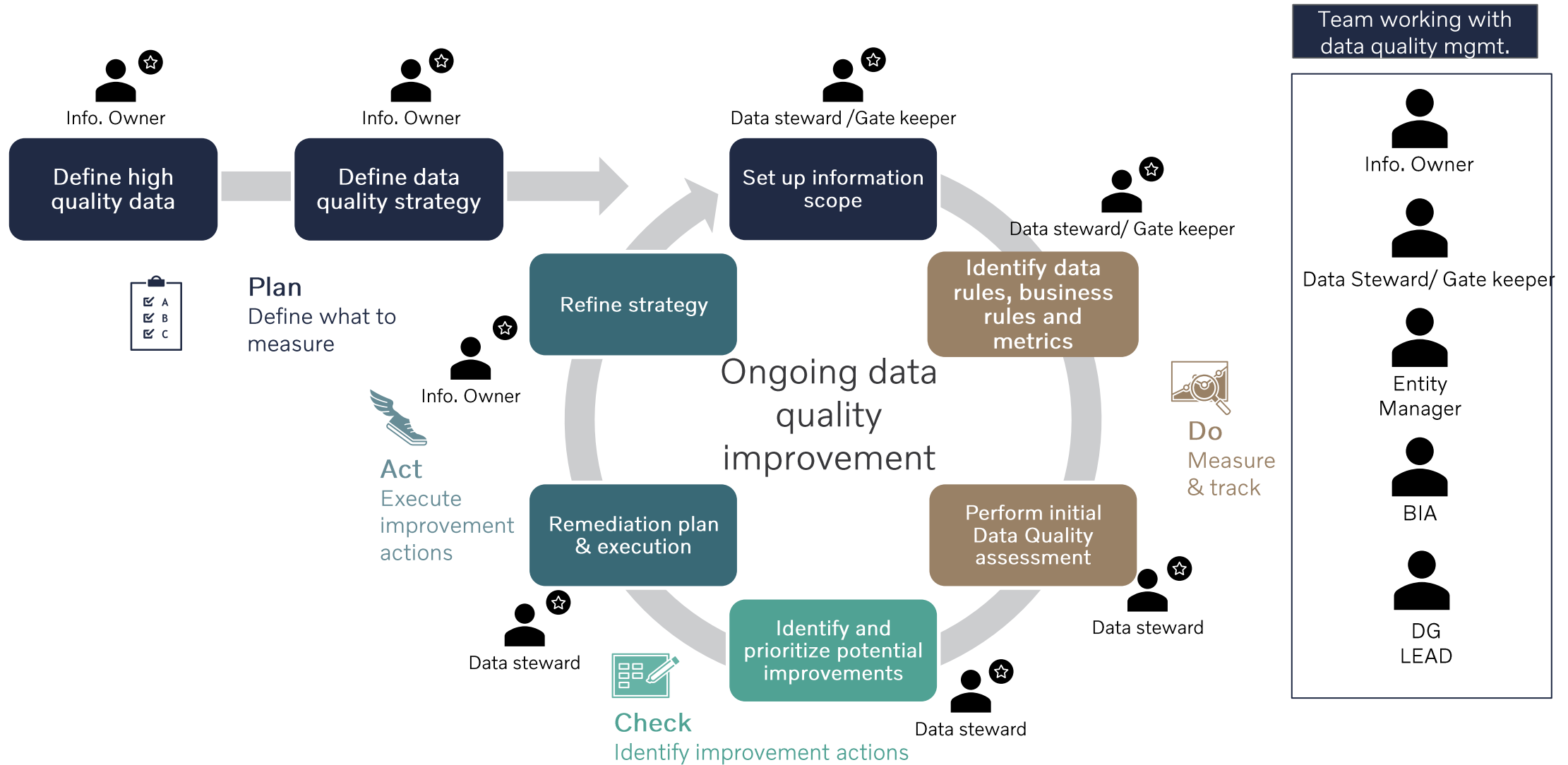
Data Governance Lead (D&IT R)

Data Steward (BR)

Business Data Driven Process – DQ



Creating a remediation plan



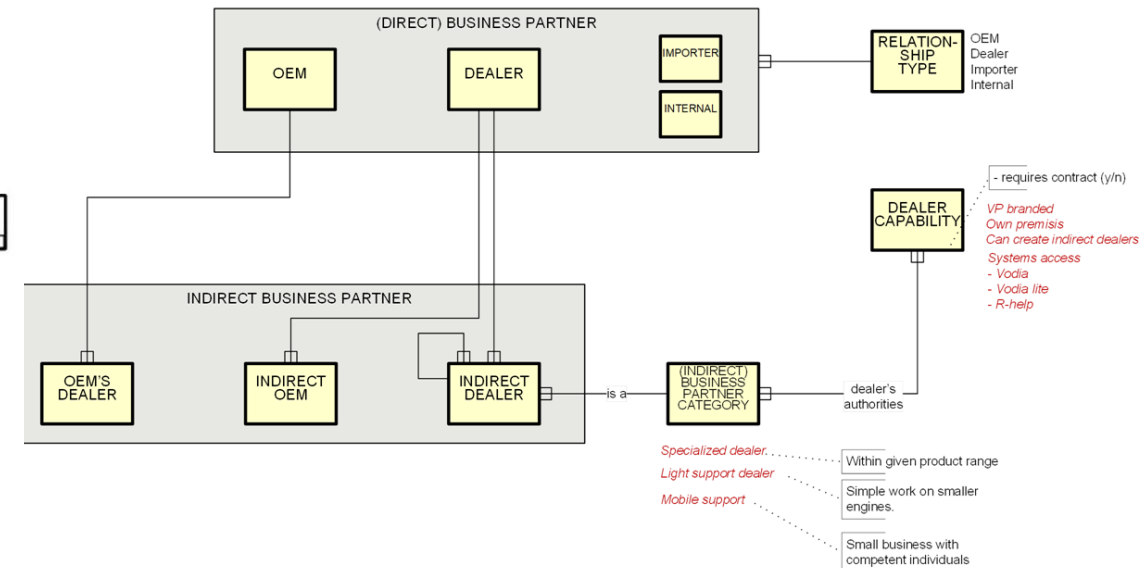
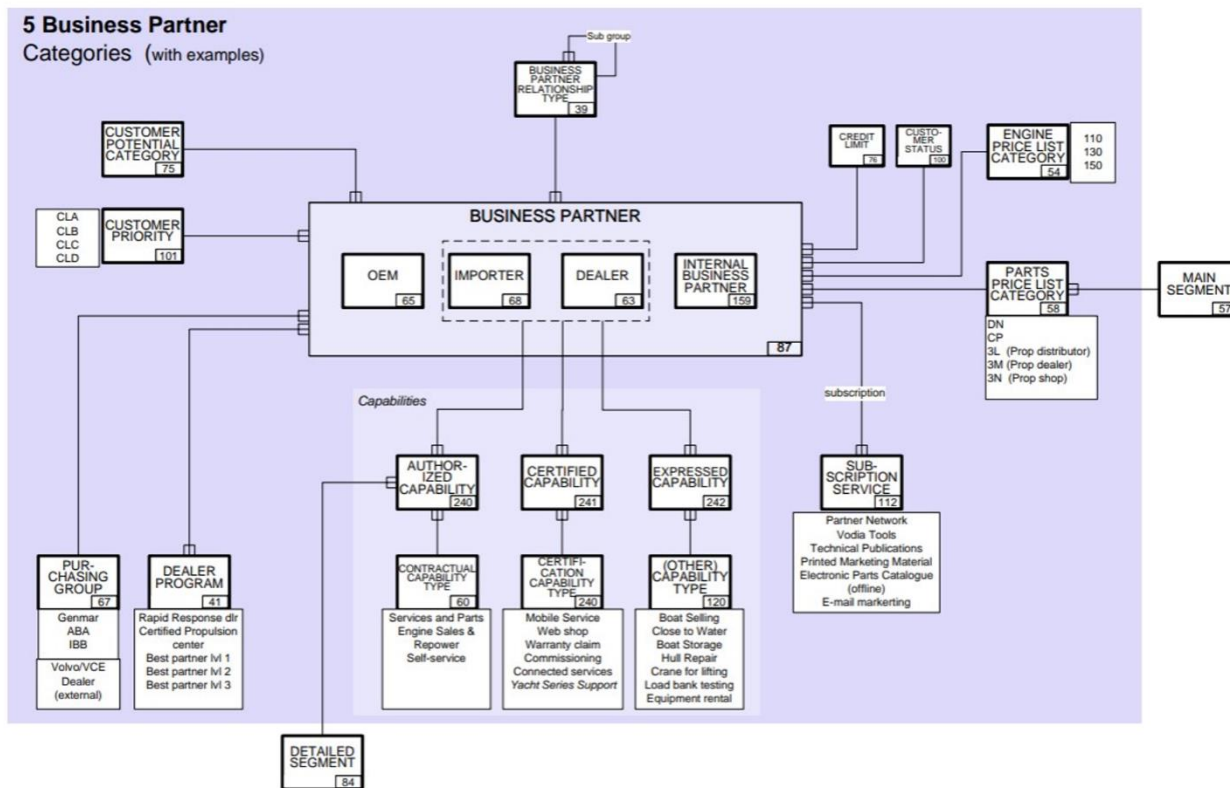
	A	B	C	D	E	F	G	H	I	J	K
	BPM Tab Name	Box Name	Data field name	Remarks	Where is the real Source(data created and updated)	Where does BPM fetch the data	Classification	to-be master (update data)	Data Admin-- job function (Creating High Level Data Ownership & Updating)		Data quality issue
1		Segments	Marine Leisure Diesel	Will add a main segment field in BPM (Marine, Industrial, Dual segment)	BPM	BPM	Business Development	BPM	BPM Central support	BD	
2			Marine Commercial		BPM	BPM	Business Development	BPM	BPM Central support	BD	
3			Industrial Genset		BPM	BPM	Business Development	BPM	BPM Central support	BD	
4			Industrial Versatile		BPM	BPM	Business Development	BPM	BPM Central support	BD	
5			Parts & Accessories	Not a segment, to be removed from BPM. Need do some IT Investigation when it is needed by some downstreas applications.	BPM	BPM	Business Development	BPM	BPM Central support	BD	
6		Company Phones	Company Phone Type	Currently the BPM update is blocked due to impact impact on some transaction Is if of financial interest? Need to shut down the field in JDE, INCLUDIGN VIEW.	JDE, BPM (BPM is temporarily blocked)	JDE, BPM	Business Development	Only in BPM	Service market	Business Partner	
7			Phone Area Code		JDE, BPM (BPM is temporarily blocked)	JDE, BPM	Business Development	Only in BPM	Service market	Business Partner	
8			Phone Number		JDE, BPM (BPM is temporarily blocked)	JDE, BPM	Business Development	Only in BPM	Service market	Business Partner	
9		Company Electronic Addresses	Electronic Address Type	a long mixed gross list, maintied in JDE. , should be split into 2 groups: Internal Transaction mastered by JDE, External presentation mastered by BPM	JDE, BPM (BPM is temporarily blocked)	JDE, BPM	Business Development	UDC table in JDE, Value on BPM in BPM	Finance	Credit Manager	
10			Electronic Address (internal transaction, logistics, finanace)		JDE, BPM (BPM is temporarily blocked)	JDE, BPM	Specific Process/transaction	Only in JDE	Finance	Credit Manager	
11			Electronic Address (External , eg DL)		JDE, BPM (BPM is temporarily blocked)	JDE, BPM	Business Development	Only in BPM	Service market	External BP (with appointed admin role)	
12			Category	Newly added field. eg OC, INV. Gross list table is maintained in JDE	JDE, BPM (BPM is temporarily blocked)	JDE, BPM		JDE	Finance	Credit Manager	
13		Key Contacts	Name	Q: The user access admin is in Baldo, but is BALDO the right and good place for storing other information for communicating purpose?	JDE, BPM (BPM is temporarily blocked)	JDE, BPM	User Info	Baldo for user list BPM for contact info	Service market & Engine Sales	External BP (with appointed admin role)	
14			Title		JDE, BPM (BPM is temporarily blocked)		User Info			External BP (with appointed admin role)	
15			Email	Some BP personnel won't need vppn access,no vppn id, no baldo setup, but we want to store contact information in BPM.	JDE, BPM (BPM is temporarily blocked)	JDE, BPM	User Info		Service market & Engine Sales	External BP (with appointed admin role)	
16			Phone	Suggest to keep connection to Baldo for picking names, but for not existing users, we allow user to add them in BPM.	JDE, BPM (BPM is temporarily blocked)		User Info		Service market & Engine Sales	External BP (with appointed admin role)	
17		Internal Contacts	Name	All link to Volvo ID in a HR system called VCD.	BPM	BPM	User Info	BPM	Service market	BD	
18			Title		BPM	BPM	User Info	BPM	Service market	BD	
19			Email		BPM	BPM	User Info	BPM	Service market	BD	
20			Phone		BPM	BPM	User Info	BPM	Service market	BD	
21		Visiting Address	Country/Area	This whoel Dealer info box is not of Finance interest. to be maintained in BPM only.	BPM & Self Service	BPM	Business Development	BPM	Service market	BD	
22			State		BPM & Self Service	BPM	Business Development	BPM	Service market	BD	
23			City		BPM & Self Service	BPM	Business Development	BPM	Service market	BD	
24			Address		BPM & Self Service	BPM	Business Development	BPM	Service market	BD OR BP?	
25			Zip code	Idea: We should not allow free text for country, state, City, zipcode, there are many mature postal system, eg. google.	BPM & Self Service	BPM	Business Development	BPM	Service market	BD OR BP?	
26			Building or Estate	Q: If we leave it to BP, maybe they should not be able to edit country, state and city. Country should be linked to general address country.	BPM & Self Service	BPM	Business Development	BPM	Service market	BD OR BP?	

Current BIM

BIM modelling discussions

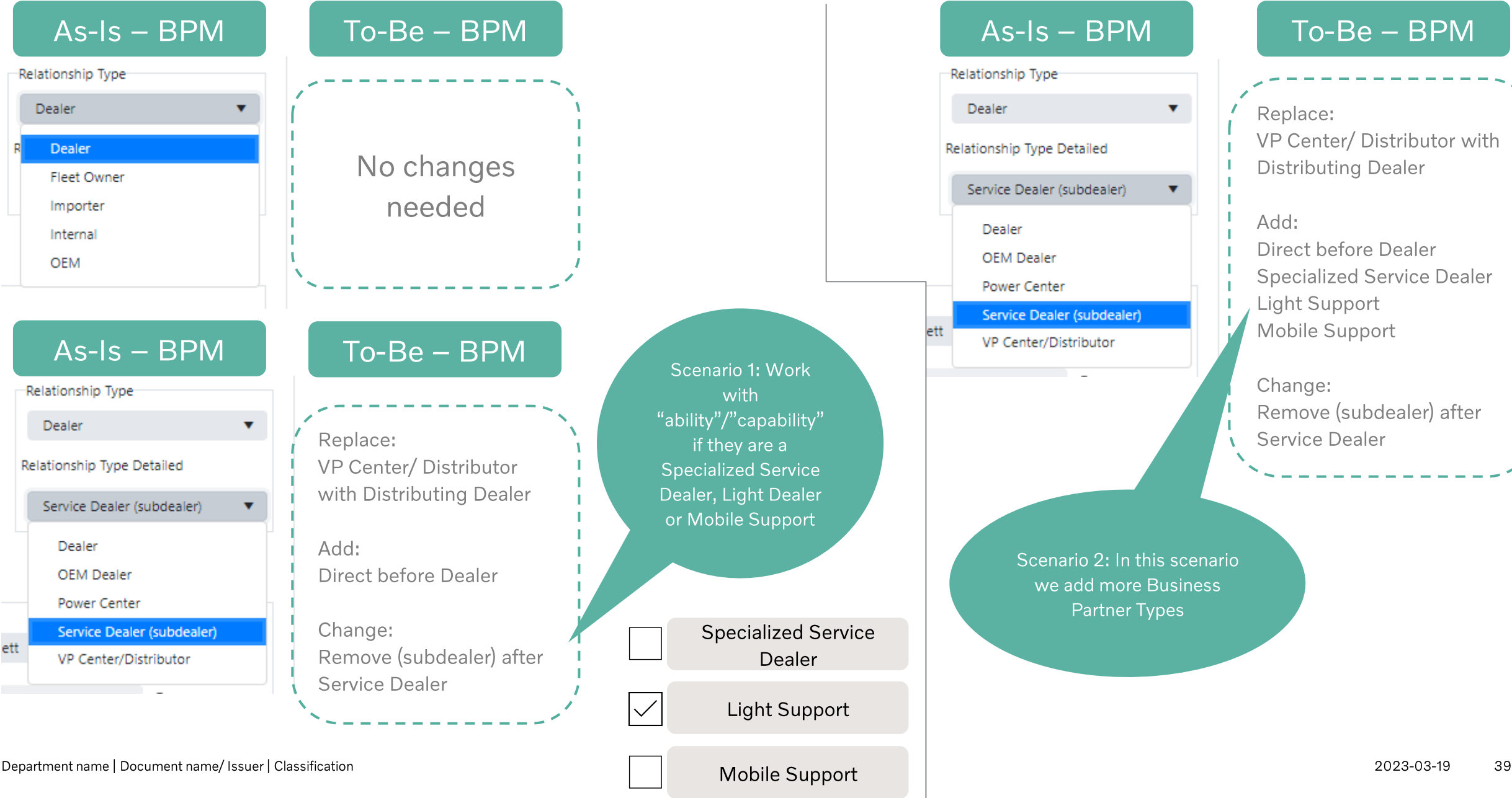
VP BIM 7.1

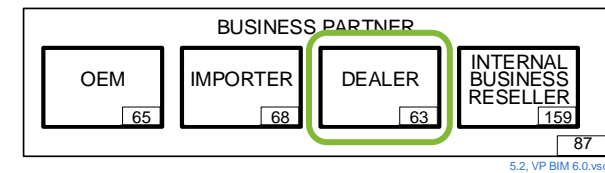
05 Business Partner

Created: February 11, 2022
Last edited: February 11, 2022

Scenario 1

Scenario 2





Definition Dealer

As-Is – BIM

A Dealer is a distributor of Volvo Penta products, accessories, parts or services. A dealer may hold a group of sub-dealers to serve the End Customers and their equipment. A dealer may be acting as a hub in a geographical area for both OEMs and other service dealers. Dealer can be sub-categorized.

In some cases, an End Customer becomes a “Dealer with restriction”, for instance due to lack of Business Partner representation in that market. Another example is that the Business Partner is a local representation for a global customer, often called OEM Dealer. Such Dealer may purchase and perform services, similar to any Dealer, but only on own VP products, and may not resell products or parts, nor perform services to others. They will not appear as an official VP dealer in the Dealer locator.

To-Be – BIM

A Dealer is a distributor of Volvo Penta products, accessories, parts or services. A dealer may hold a group of sub-dealers to serve the End Customers and their equipment. **In this case, the sub-dealers are “indirect Business Partners” to Volvo Penta.** A dealer may be acting as a hub in a geographical area for both OEMs and other service dealers. Dealer can be sub-categorized.

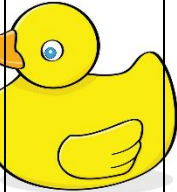
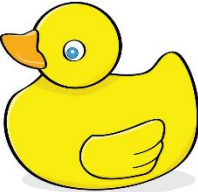
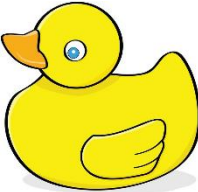
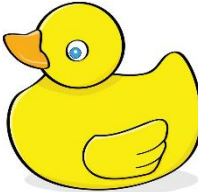
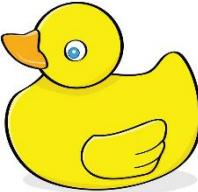
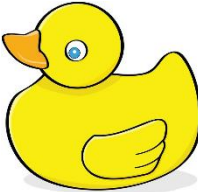
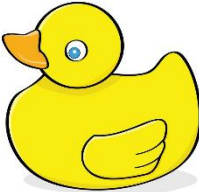
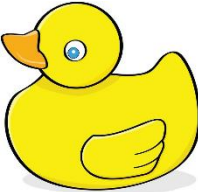
When do we use “Dealer with restriction” How do we know who they are from a BPM perspective?

(should remove dealer with restrictions)

After looking at indirect and understanding what is covered there, a definition is of fleetowner (direct)

VOLVO PENTA

Business Partner Master

ID #	Full Name	Display Name	VAT #	regsitered in Country code	Established Year	DUNS #	parent Business Partner ID#
198728	Volvo Penta AB	Volvo Penta	556665-2021	SWE	1915	2349879324	198731
198729	ID Informed Decisions AB	Informed Decisions	874621-7276	SWE	2012		-
198730	ZEK Holding i Nyhamnsläge AB	ZEK Holding	874621-7101	SWE	2011		198730
198731	AB Volvo	Volvo	556665-1022	SWE	1928	43958754938	-
							

WHAT NEEDS TO BE DONE ?

- Enabling Digitalization
- Using Data for Business decisions
- Offering services to our customers

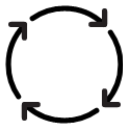
Strong governance
with focus on customer,
Products and services data



Set roles and
networks
throw out our
organization



Create Data
Awareness in all
business areas



Summary



Take aways from our journey @VP

1. Develop a clear data strategy aligned with the business strategy and digitalization strategy
2. Establish data governance and framework
3. Find the right people and roles depending on what kind of data
4. Create a culture that values data and encourages the use of data in decision making
5. Start small think big

By following these steps, VP built a strong foundation in data management that enabled us to effectively use data to drive business growth and success.....BUT WE ARE STILL STRUGGLING.....

V O L V O P E N T A

THANK YOU!

V O L V O P E N T A

QUESTIONS ?