Transformation of Product Creation at Volvo Cars

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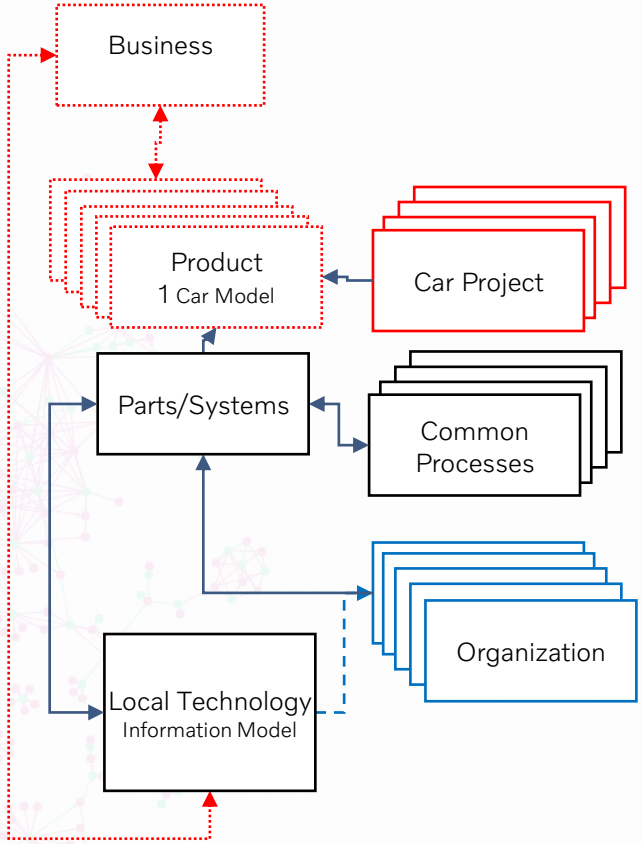
From -

Our heritage
- Projects/platforms start from “zero”
- “Assembled Parts”, chimney/silo development
- Build and test
- Focus on the end customer, buying the car
- Strong Project Leaders, fixing

Evolving
- Focus on mechanical development.
- Electrical and software development as a separate community
- Function as electrical function, evolving to more user related definition
- System development and integration of systems/ECU´s, still chimney/silo

Starting point for transformation
- Many separate actors of three kinds, i.e., departments, processes and projects
- “No” description of the product available in R&D, product visible after manufacturing
- Thinking that “Systems Engineering” is a silver bullet to be defined and executed by a small/limited team…
- Increasing complexity in products and their environment (code)
- Increasing speed of change

Target
It should be easy to develop complete and functioning products –
the challenge for the future is to create the customer experience



To – an ability to manage the Products dynamically in their contexts,...

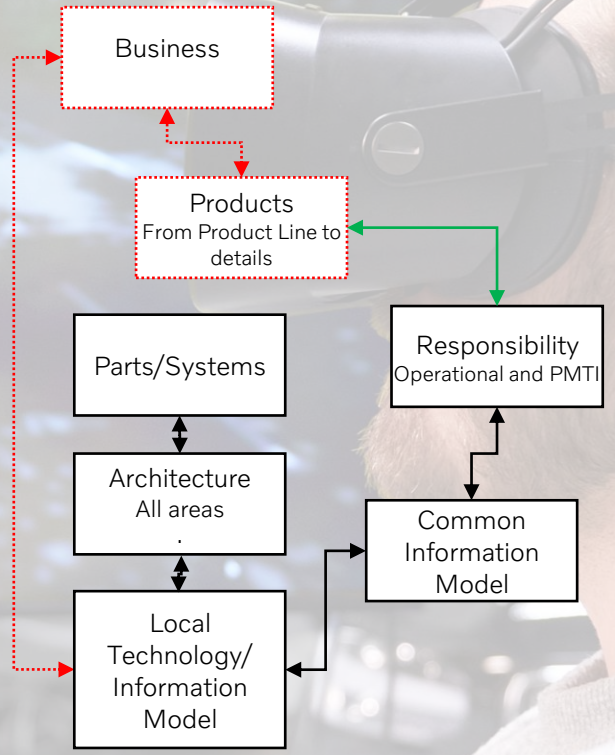
Architectures are there, in all areas

An common Information Model is needed, enabling descriptions of:

- Contexts, activities in situations related to users
- User Experience and corresponding Product Behavior
- Capabilities and Systems
- Building blocks w/ interfaces and Parts
- Technical views on Systems and Building Blocks
- Product Line Management, one toolbox.
  One common structure for commercial and technical descriptions

Clear responsibilities for all above, both for delivery and PMTI (Process, Method, Tool, Information)

Life cycle perspective on all



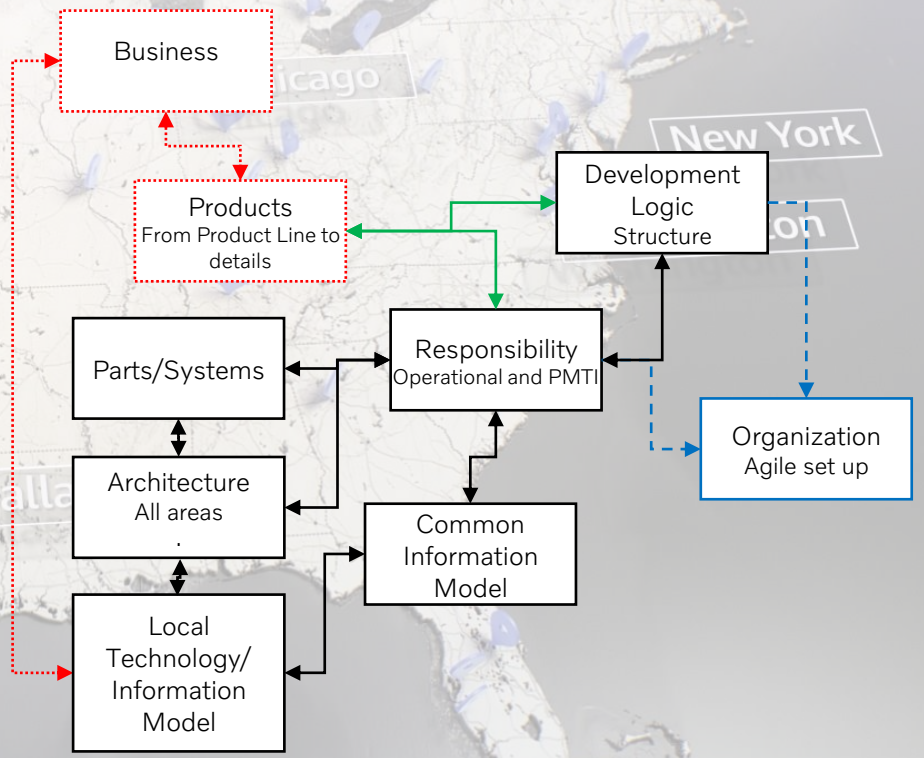
… and to create an organization dynamically based on the Products

IN - CAR DELIVERY
US ROLL OUT

New set up, to become operational based on

- New development logic structure, defining how to work at different levels (complete product, across organization, …) with different types of activities (content management, planning, design, testing,…)
- Digital models of all aspects of the product and development logic also used as the base for the digital model of the responsibilities defining the organization
- Above used to enable compliance of upcoming regulations related to both Product and Processes
- Running everything in real time for all related lifecycles based on time efficiency of and variant management

Based on the integrated dependencies the target is to create an eco system for development that develops itself over time



Conclusion:

From

Thinking that “Systems Engineering” is a silver bullet to be defined and executed by a small/limited team…

To

A “new” understanding that **all above** is Systems Engineering, **everything** need to be involved accompanied by a new mindset

This is what we now making a reality, step by step

Doing this we would welcome a dialogue with others on the principles

Thank You!