



# Rolls-Royce

## Trusted to deliver excellence

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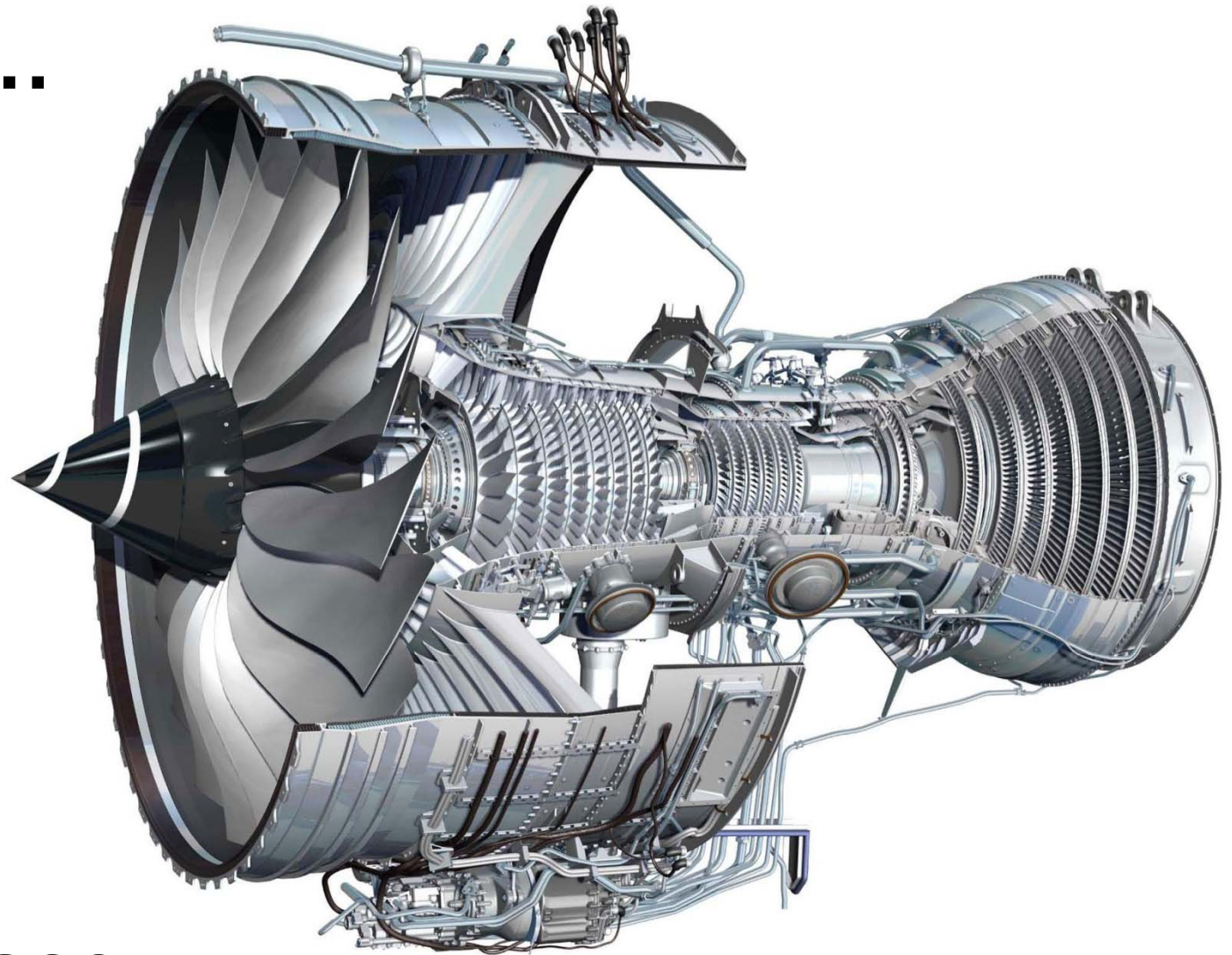
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# We are not...



**We are...**



**Civil  
Aerospace**

# We are... Defense Aerospace

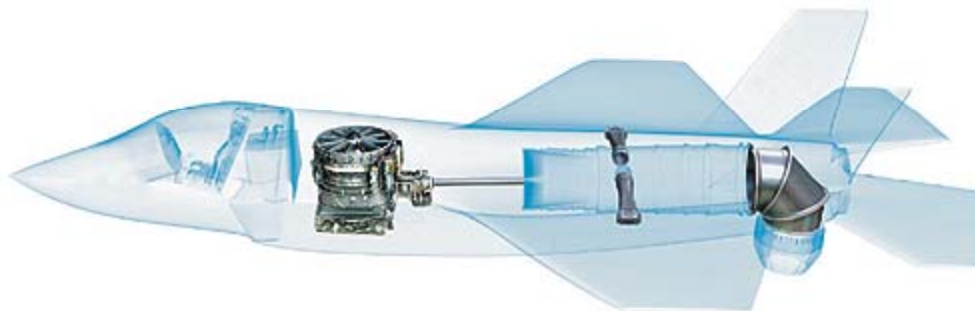
AE 1107C-Liberty



T56 turboprop

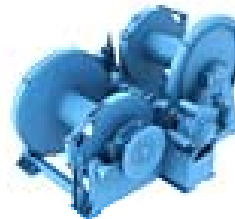
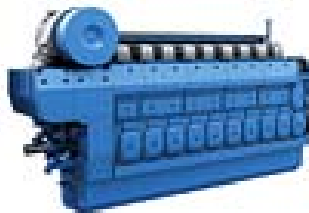
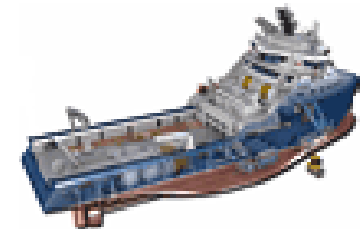
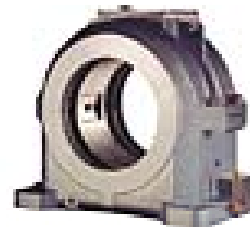
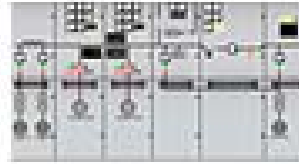


M250 turboshaft



# We are...

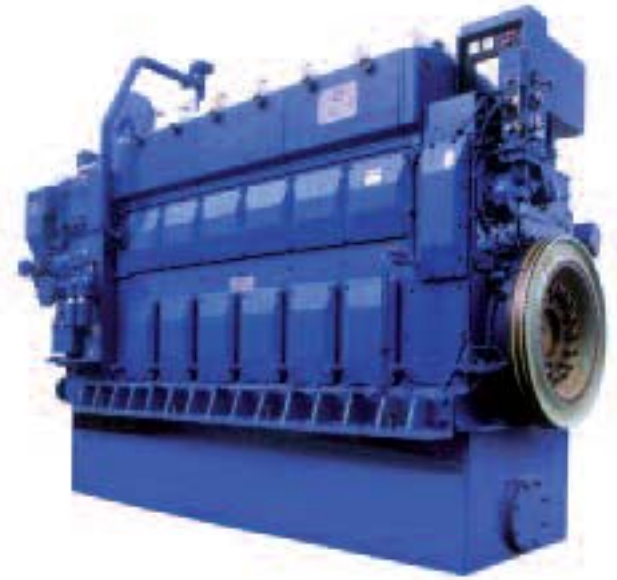
# Marine





# We are...

# Energy



# Our consistent strategy

## Based on five key elements

- address four global markets
- invest in technology, infrastructure and capability
- develop a competitive portfolio of products and services
- grow market share and installed product base
- add value for our customers through the provision of product-related services



# 2011 financial highlights

order  
book

**£62.2<sub>bn</sub>**

underlying  
Group revenue

**£11.3<sub>bn</sub>**

underlying  
profit

**£1.16<sub>bn</sub>**

original  
equipment

**47%**

services

**53%**



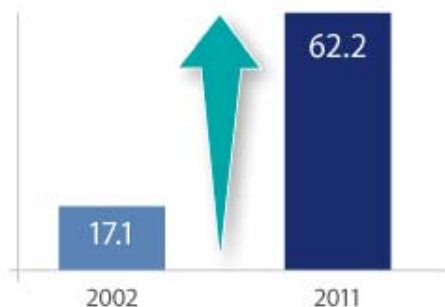
## Underlying Group revenue contribution 2011

Civil aerospace	<b>49%</b>
Defence aerospace	<b>20%</b>
Marine	<b>20%</b>
Energy	<b>11%</b>

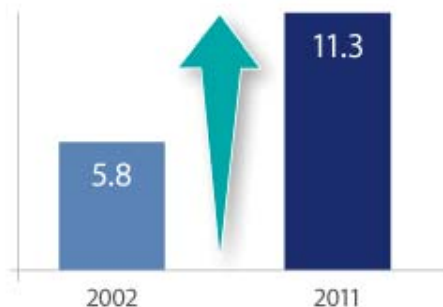


# A decade of growth

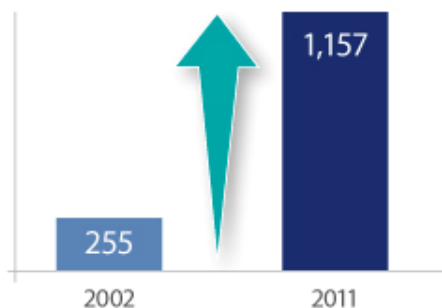
Record order book (£bn)



Record underlying revenue (£bn)



Record underlying profit (£m)



## £62.2bn order book

Europe	£14.8bn
Asia and ME	£28.7bn
N America	£13.9bn
S America	£3.2bn
RoW	£1.6bn

# Investing globally to support future growth

In the past three years, we have opened 14 new facilities in global locations including:

- UK
- USA
- Germany
- Norway
- China
- Brazil
- Singapore



## 2011 capital investments

The Group invested £467 million in 2011 on new and improved facilities

# We expect to double turnover in the next ten years

## Growing markets

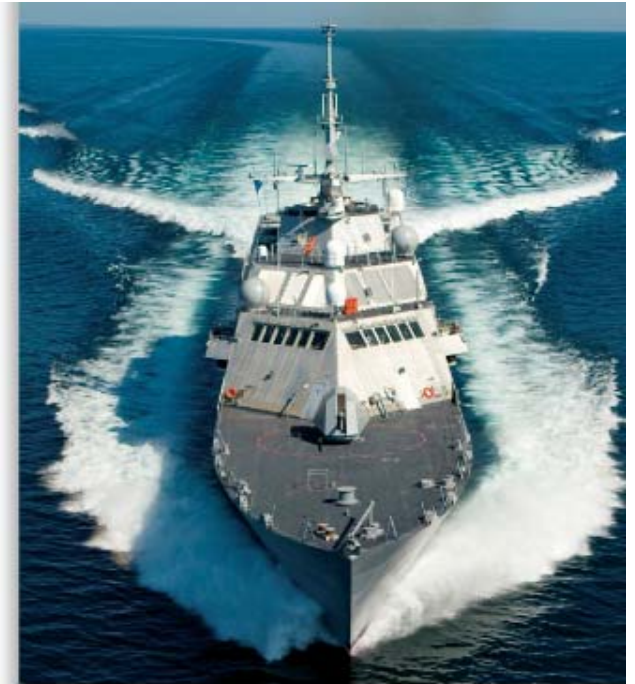
- we address four global markets

## Growth of existing programmes

- Airbus A330
- C-130J, V22 Osprey
- Industrial Trent and RB211

## Major new programmes

- Boeing 787 Dreamliner
- Airbus A350 XWB
- Airbus A400M
- Littoral Combat Ship
- Wave-piercing UT Design vessel
- F-35B Joint Strike Fighter



## Market opportunity over next 20 years

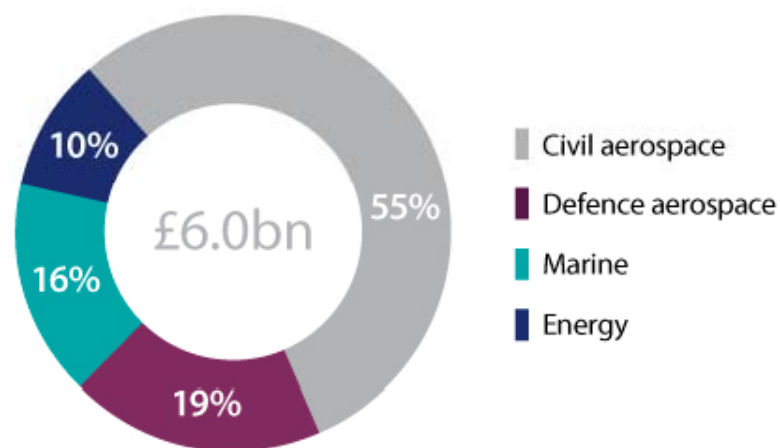
Civil aerospace	<b>US\$1,400bn</b>
Defence aerospace	<b>US\$415bn</b>
Marine	<b>US\$340bn</b>
Energy	<b>US\$120bn</b>
Civil nuclear	<b>US\$640bn</b>



# Services

Adding value for customers with comprehensive and advanced services that enhance the performance and reliability of our products.

Contribution to Group services revenue 2011



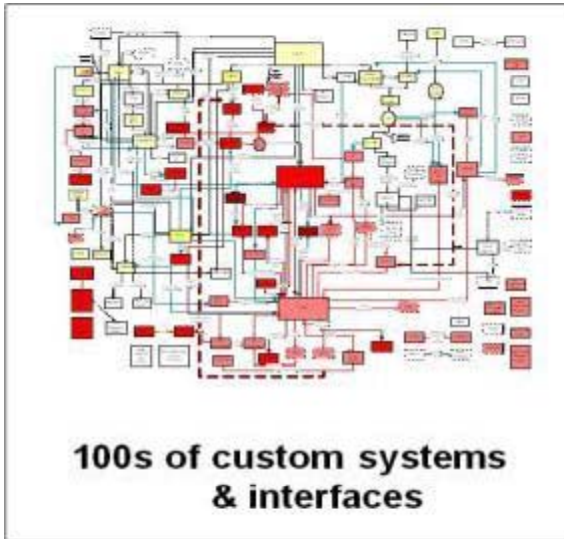
## 2011 services revenue\*

Civil aerospace	£3,340m
Defence aerospace	£1,133m
Marine	£949m
Energy	£597m
Total	£6,019m

\*Underlying figures

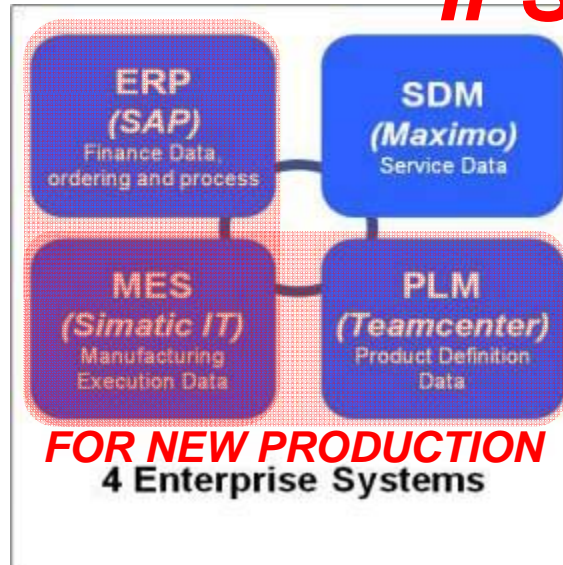


# The Corporate Vision *IPS*



## *Our Legacy*

- *Cross system process complexity*
- *Unstable platforms*
- *Sub-optimal traceability*
- *Not volume ready*
- *Not supportable*



## *Our emerging reality*

- *Single source of knowledge available for reuse*
- *Integrated and simplified processes*
- *Volume ready*
- *Controlled & stable product*
- *Supportable*



## *Our Future*

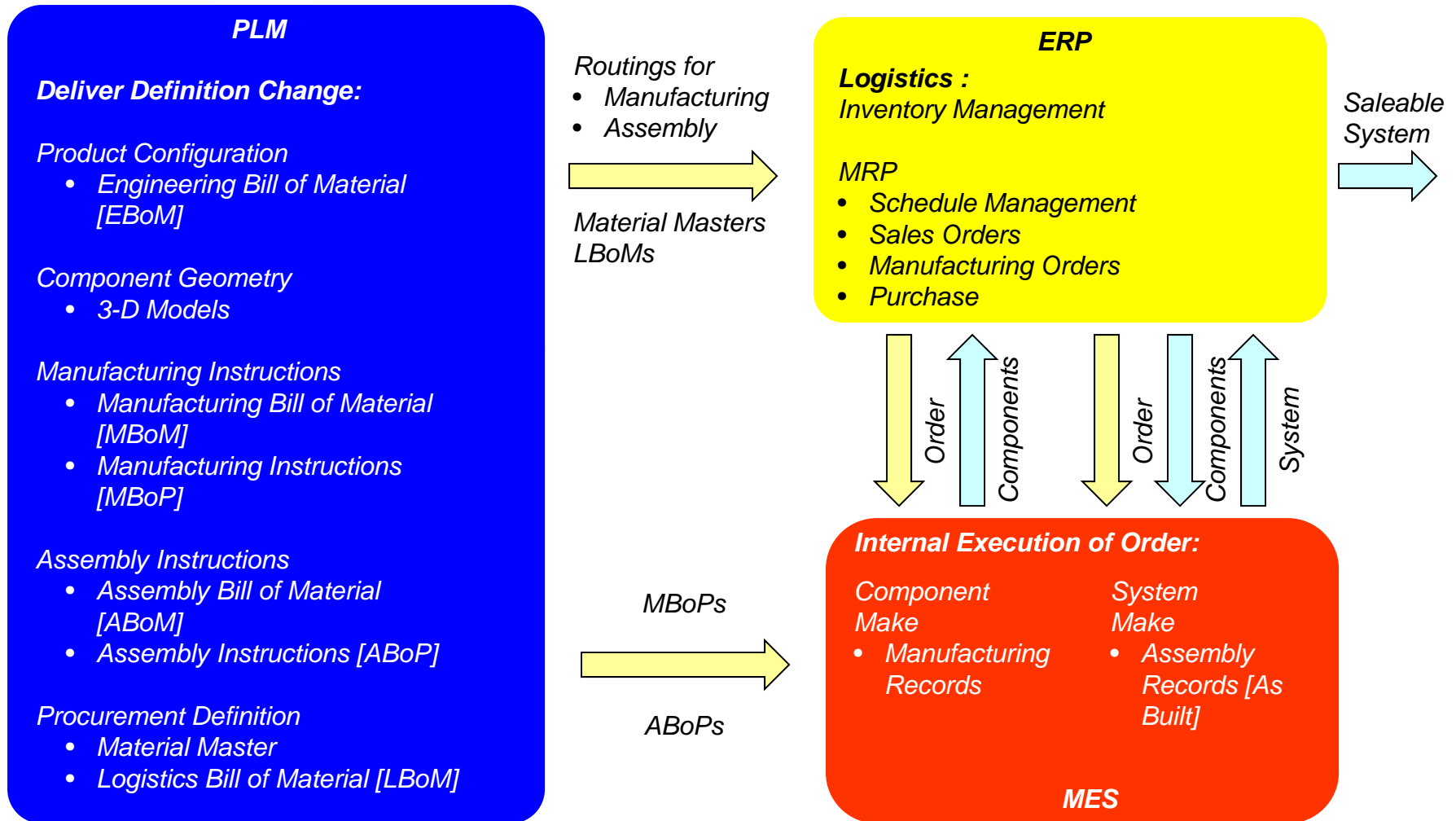
- *Reduced modifications, costs, lead times and non-conformance*
- *Ability to exploit global assets*
- *Enabling delivery*
- *Reduced cost of ownership*

# IPS Principle



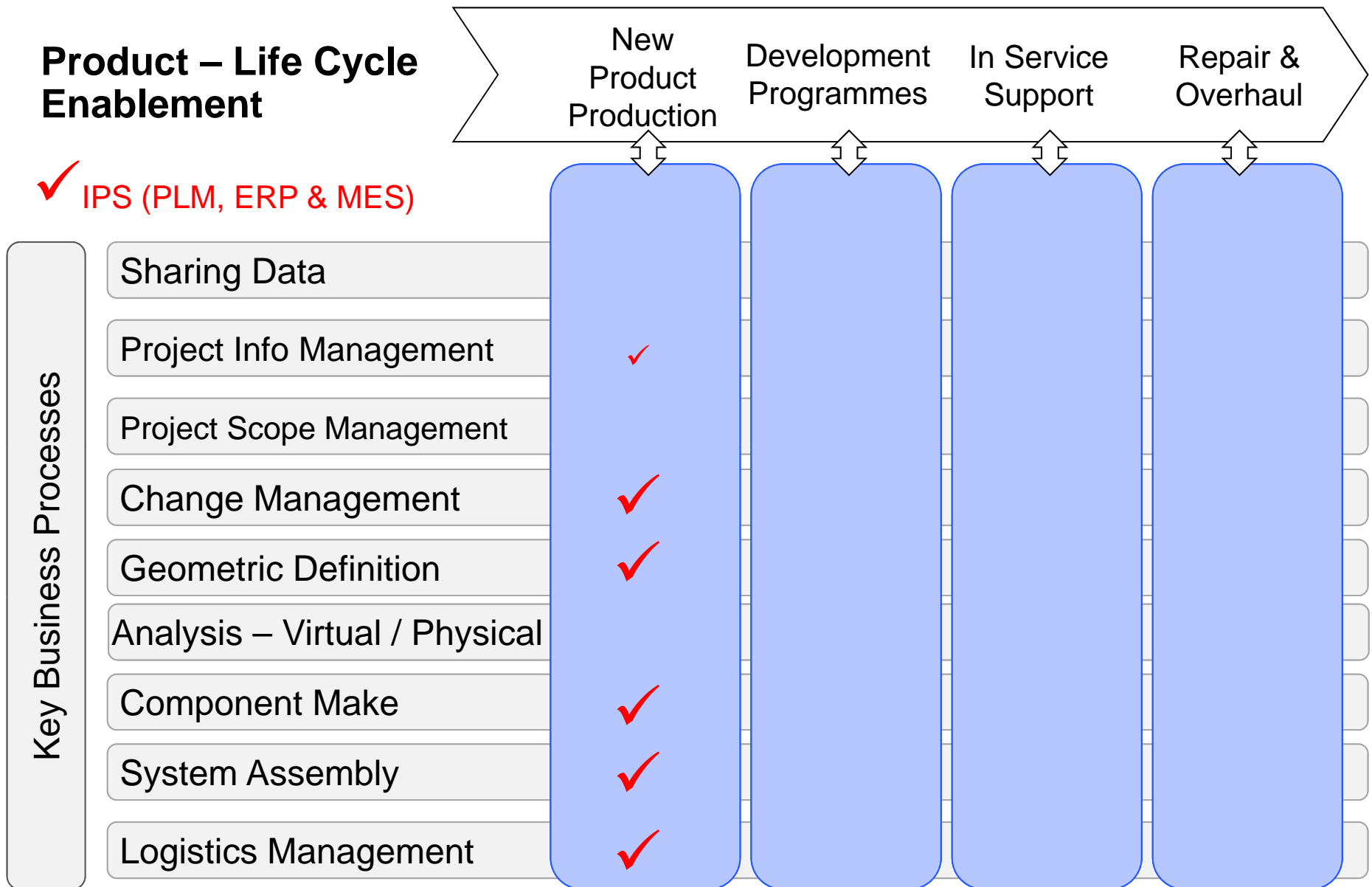
**Create once, use many times!**

# IPS – Simplified Data Flow Schematic



# Product – Life Cycle Enablement

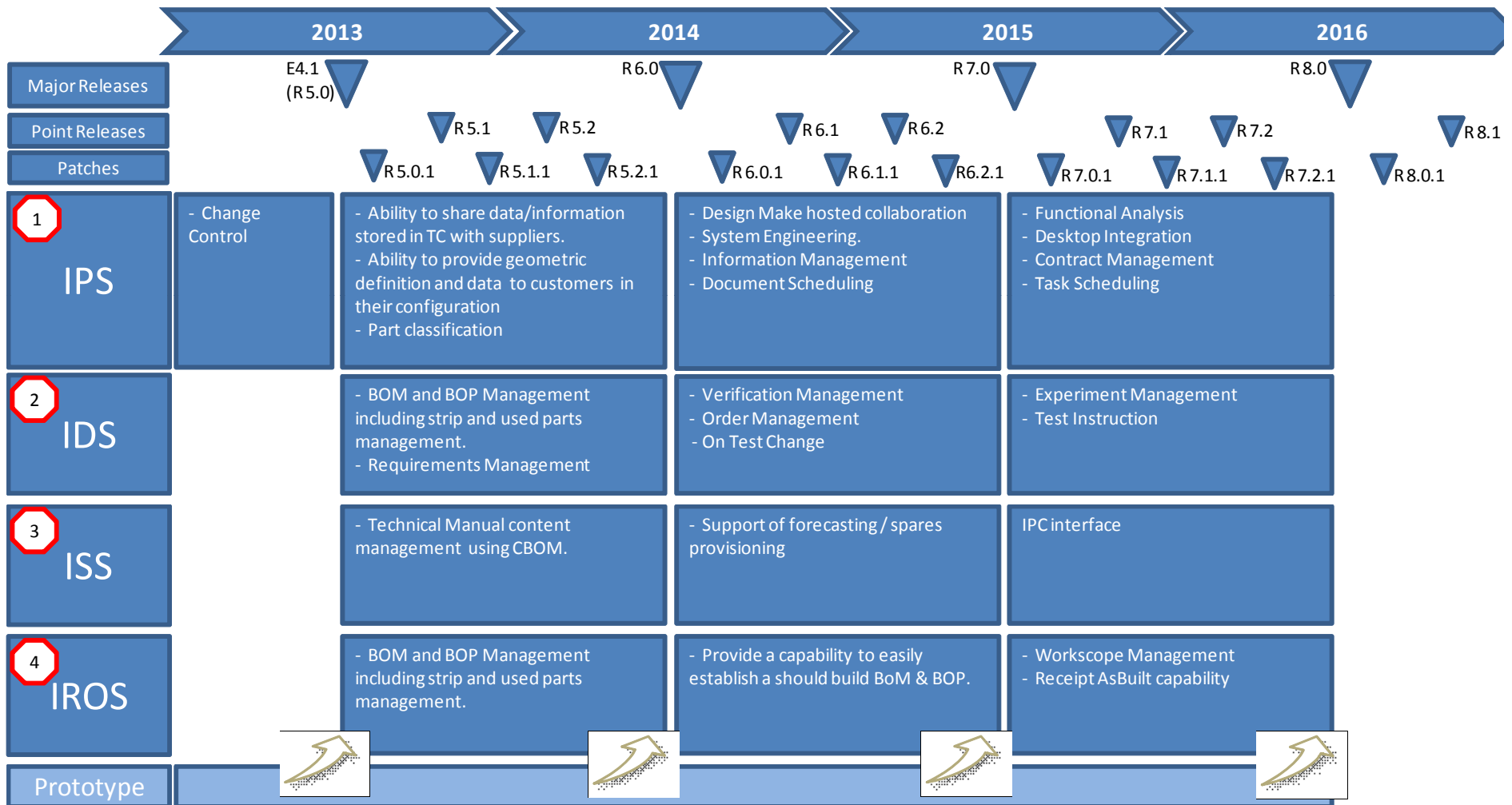
✓ IPS (PLM, ERP & MES)





# Rolls-Royce PLM Strategy

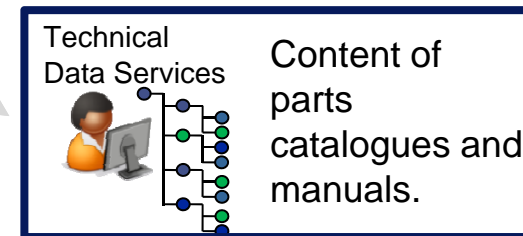
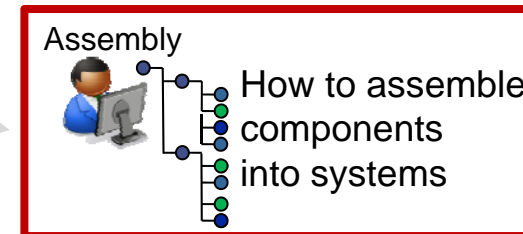
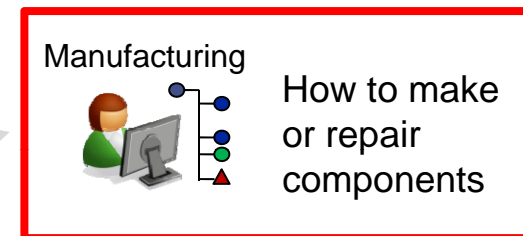
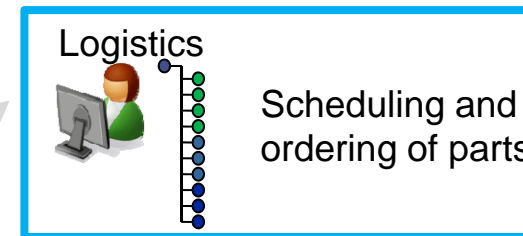
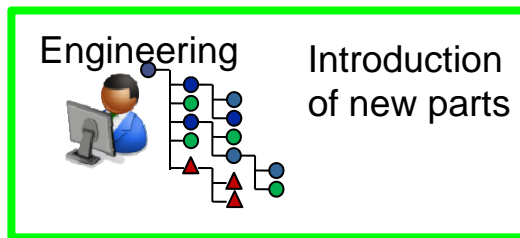
## PLM DEVELOPMENT STRATEGIC BUILDING BLOCKS



# Management of BoMs / BoPs- Today

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- Per Product 5 BoMs created and maintained in different systems in different business.
- Each BoM is manually maintained in sync.
- Systems are different across Development, New Prod Build and AR&O

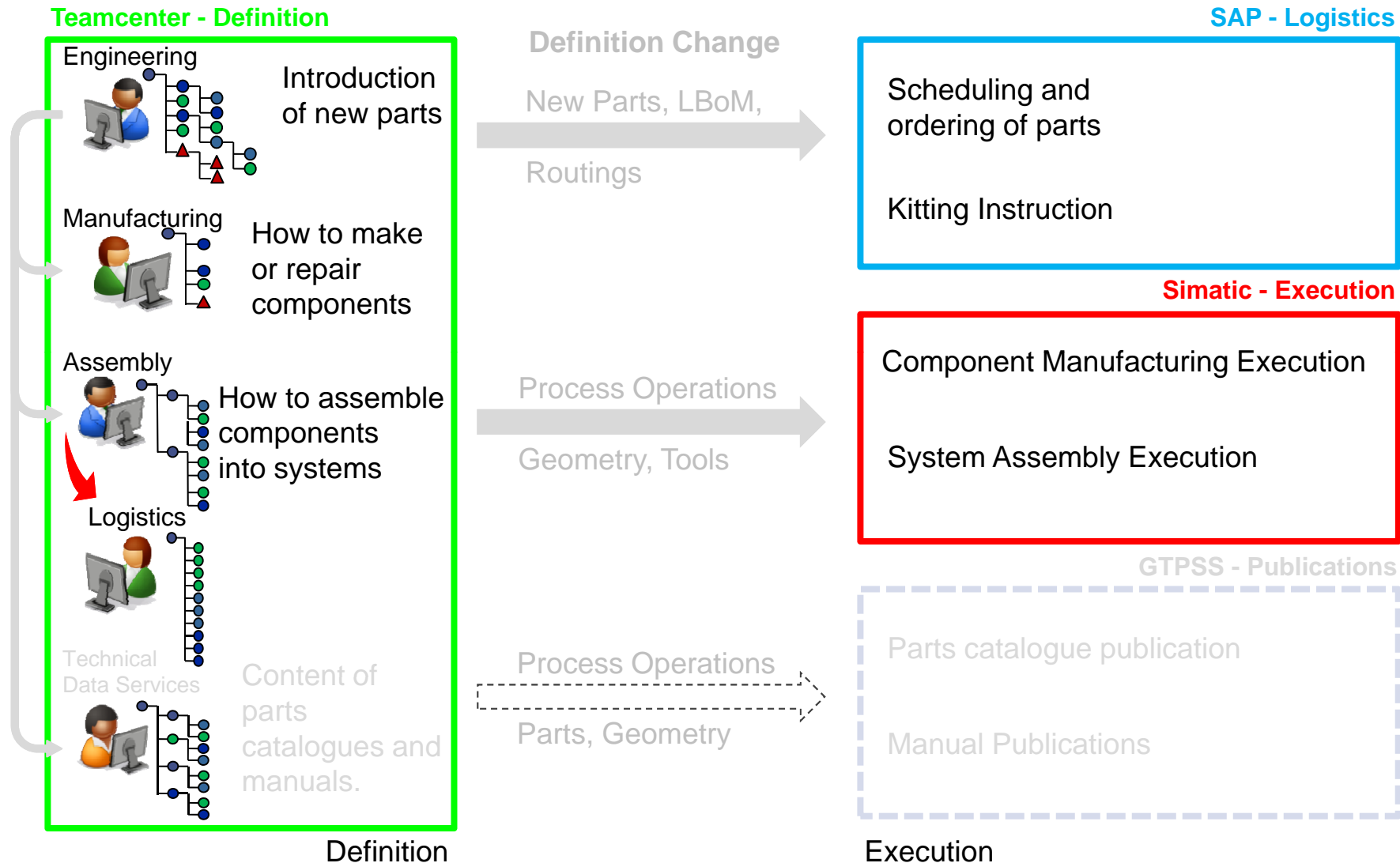


## OUTCOME

- A significant number of manually maintained BoMs.
- Barrier to sharing work on a Product around the globe.

# Management of BoMs with IPS

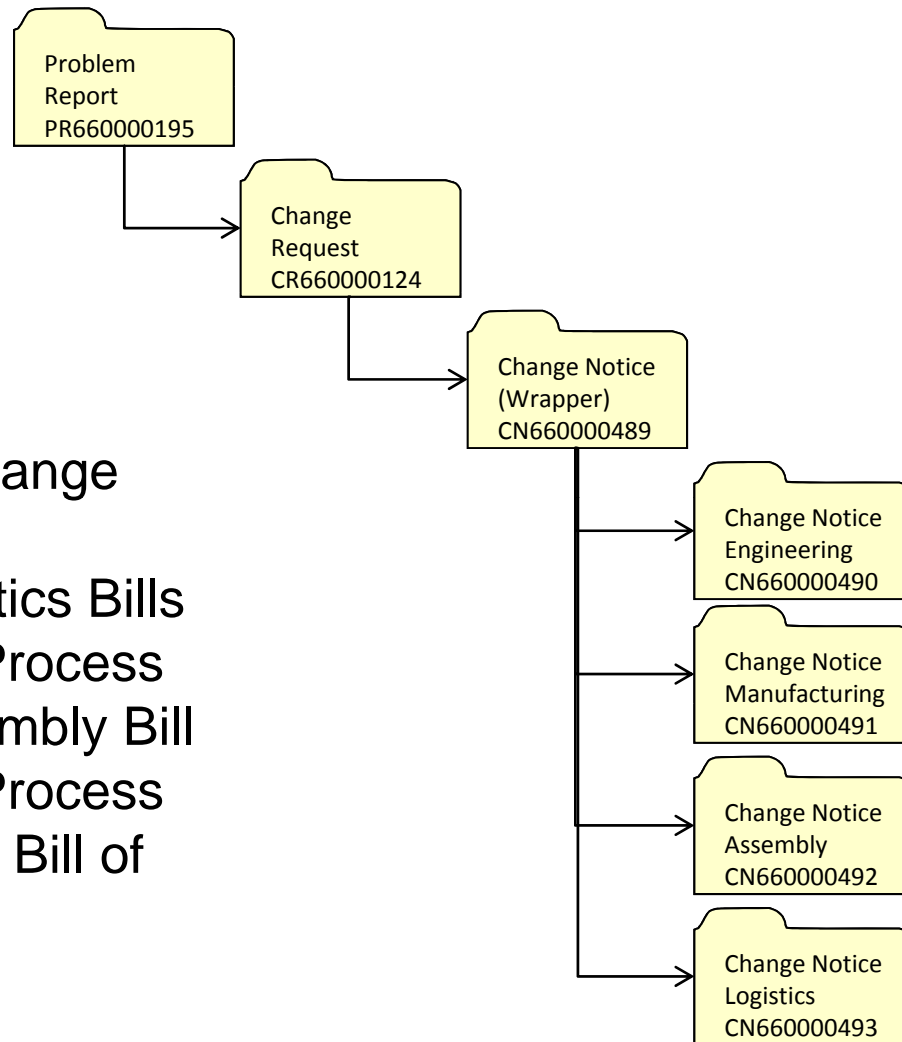
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# Change Objects

An engineering part change results in a new:

- Manufacturing Logistics Bills of Material & Bill of Process
- Revision of the Assembly Bill of Material & Bill of Process
- Revision of Logistics Bill of Material





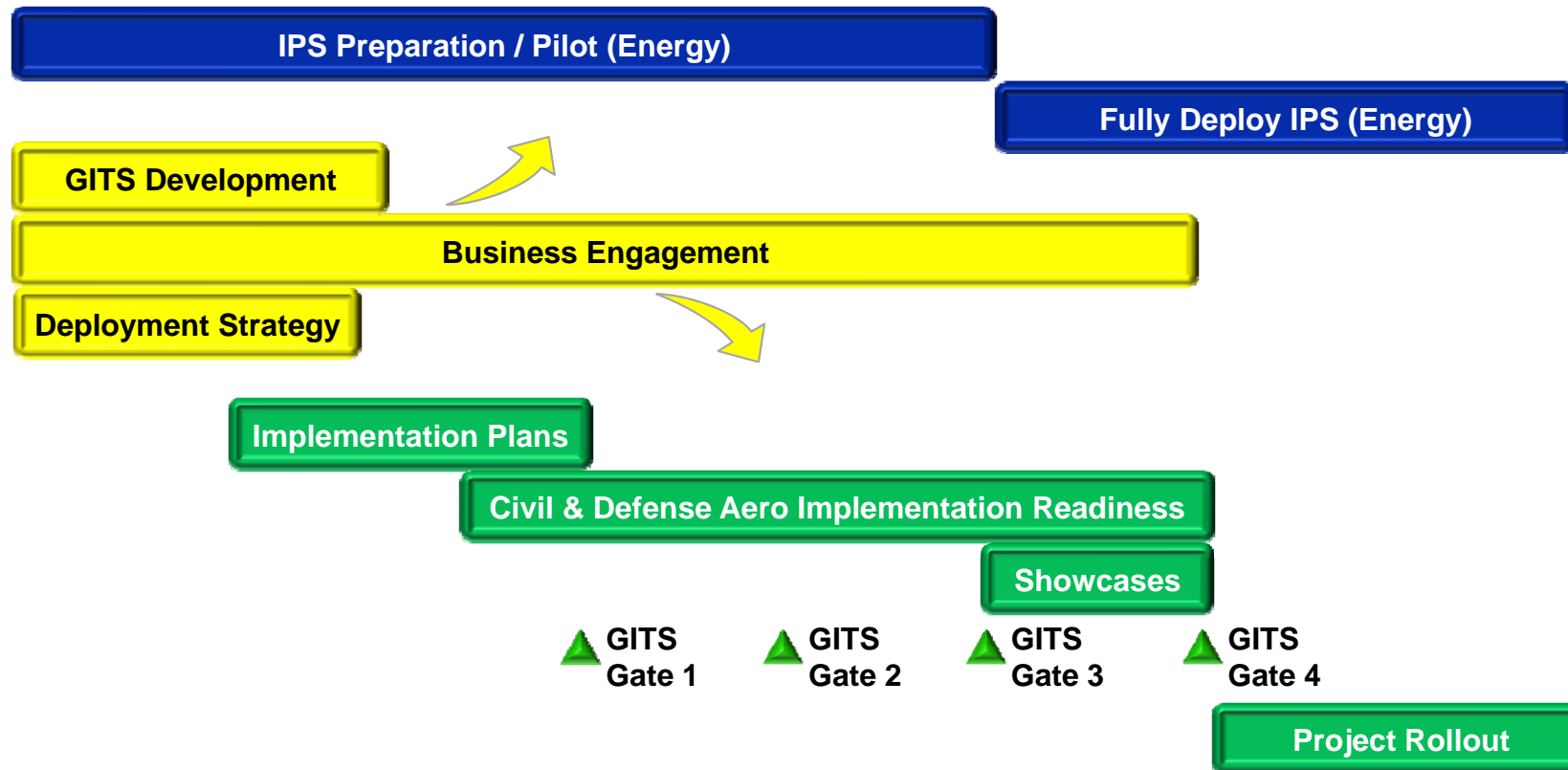
# New Production Deployment Timeline

Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
2012			2013				2014

▲ Dec 2012  
Beta Release

▲ June 2013  
Corporate Release

▲ IPS Pilot



# PLM will eventually affect the entire product lifecycle...

Product Test  
& Validation

Manufacturing  
Engineering

Manufacturing  
Production

Launch

Sales  
& Distribution

Maintenance  
& Repair

Disposal &  
Recycling

*Major investment by Rolls-  
Royce to change the way we  
work and improve our  
competitiveness*

Requirements  
& Planning

Concept  
Engineering

Product  
Engineering

Sourcing