# Value Driven Implementation

PLMIF Innovation Forum

Johannes Storvik
CTO, Head of CoE, TECHNIA

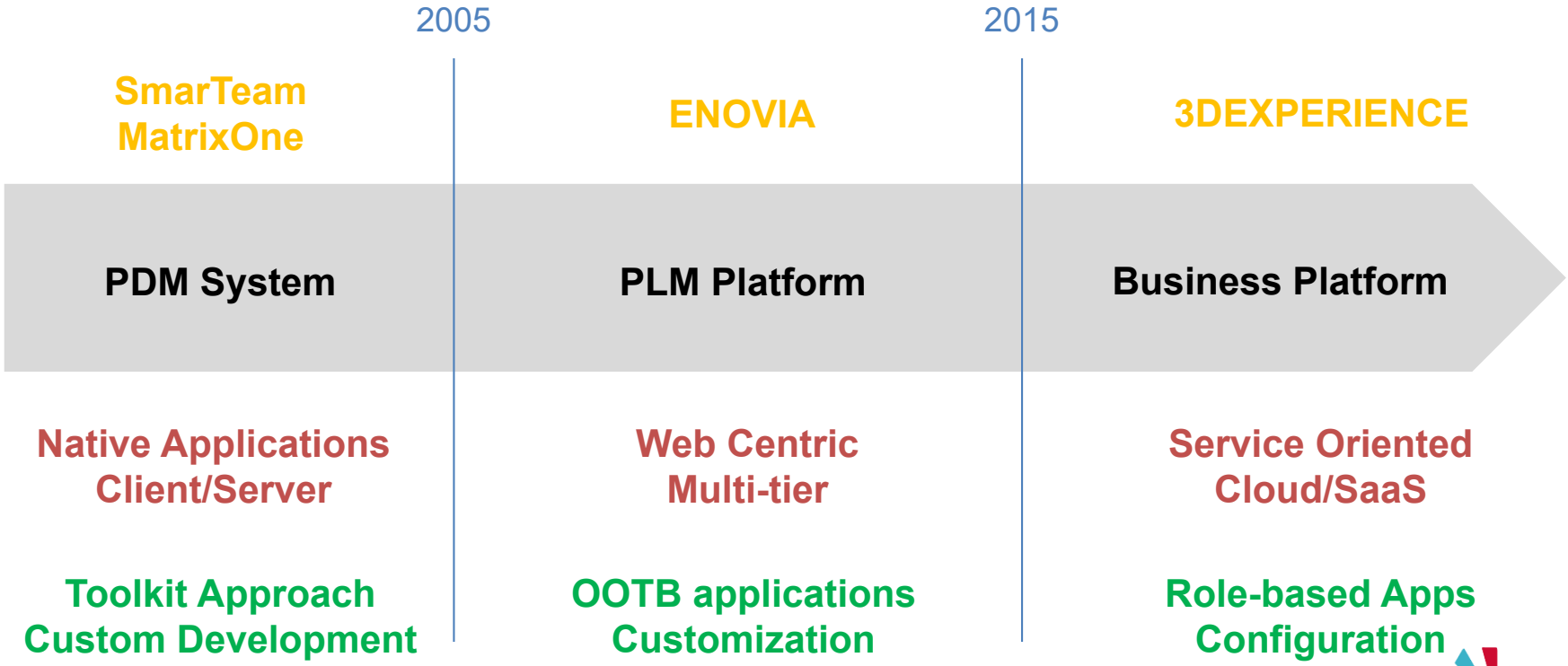
DIGITALIZATION FOR SUSTAINABLE PRODUCT DEVELOPMENT AND MANUFACTURE

# First: Focus on doing the right things

...then focus on doing things right

# A brief history of PLM

As technology evolves, we must adapt our approach



# Flexibility has a cost

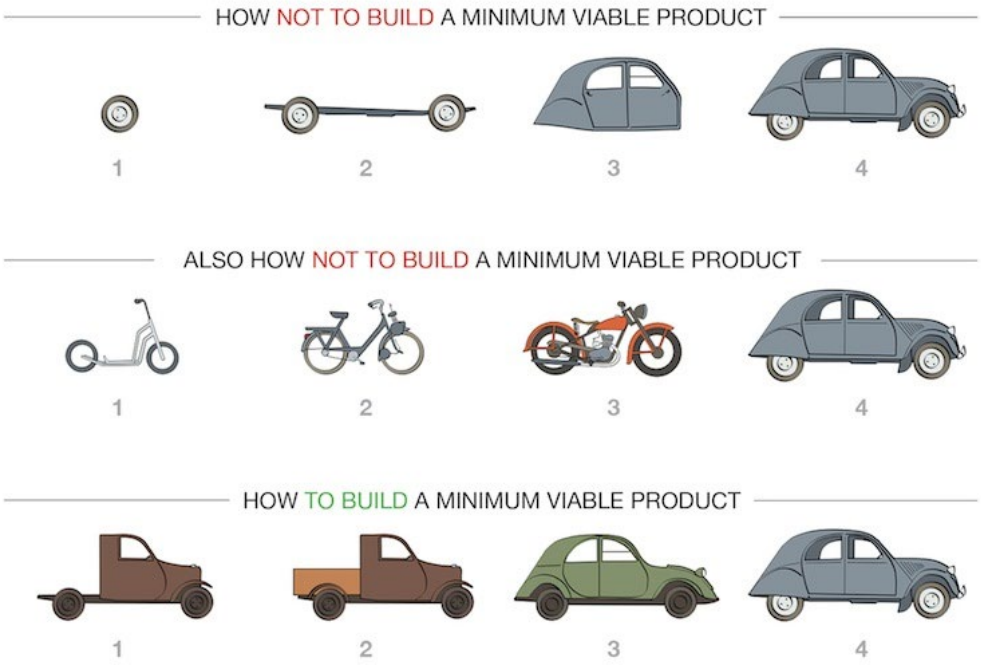
Expectations are closely connected to the approach

Toolkit

OOTB

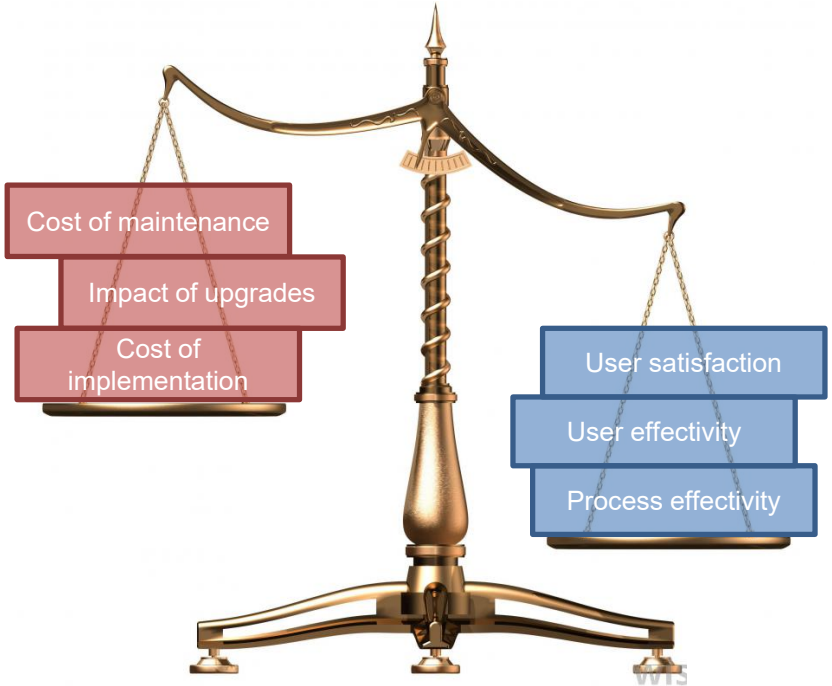
Cloud/SaaS

# Agile approach for Out-of-the-box solutions





# How to prioritize?



# PLM benefits for the company

The measurable benefits of PLM are focused around **time**, **cost** and **quality**:

| | | | |
|---|---|---|---|
| Reduced cost finding product data faster and increasing reuse | Faster time-to-market | Improved cycle times | Fewer Errors |
| Less scrap & rework | Greater productivity | Better product quality | Improved design review and approval processes |
| Improved communication | Reduced product cost and greater profitability | Better resource utilization | Improved integration and communication with extended supply chain |

# PLM benefits for the user

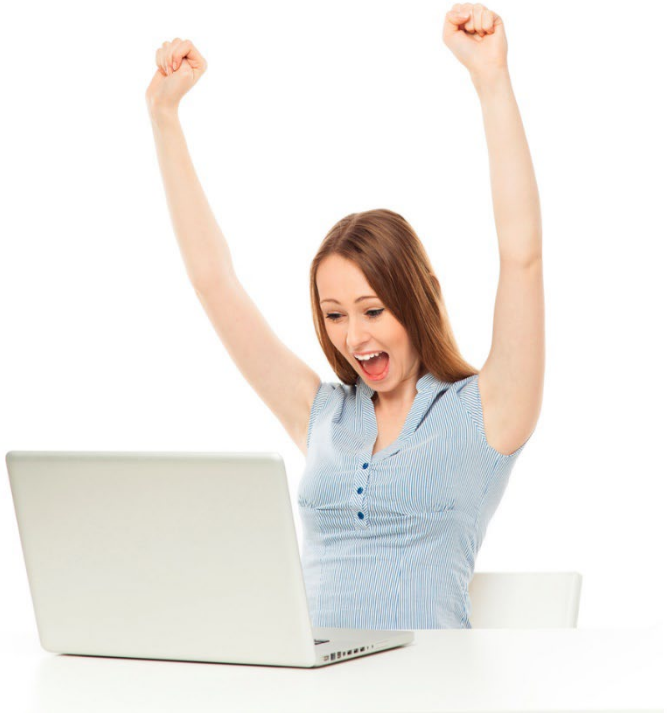
**Find it fast**
- a single source of data

**Trust it**
- revision and security control

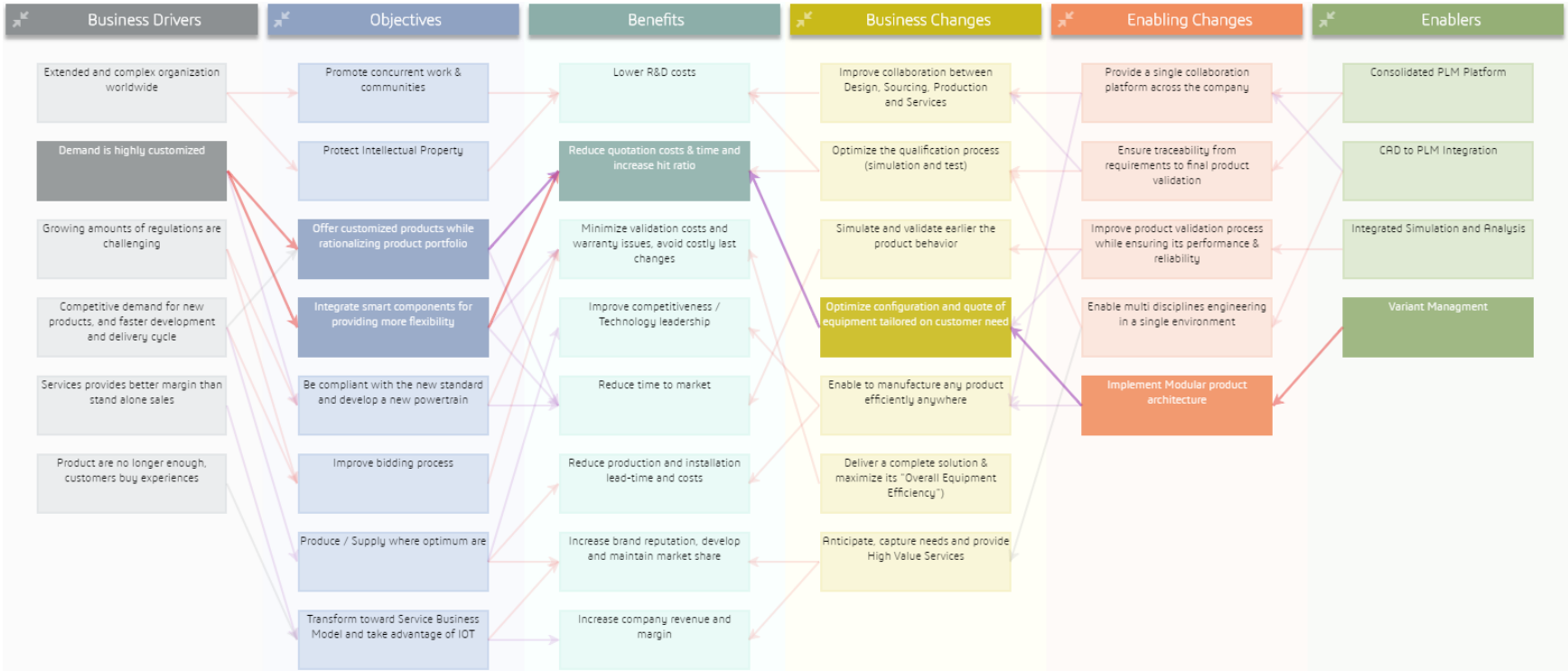
**Comprehend it**
- intuitive 2D/3D visualization

**Understand context**
- rich information relationships

**Know when & what to do**
- schedule and workflow automation



# Connecting the Dots: Business Driver to Enabler



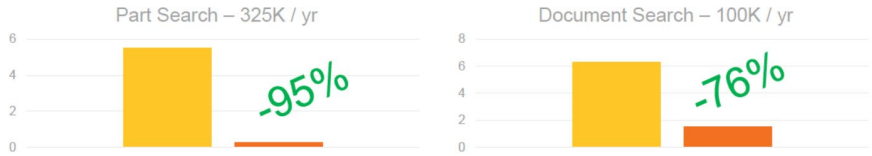
# Quantifying the Benefits

**Typical figures for an industrial company:**

Time-to-manufacturing: 10% to 50% reduction
Engineering change process: 10% to 70% reduction
Design review process: 50% to 80% reduction
Increased productivity: 10% to 20% increase
Product development costs: 25% to 40% reduction
New part numbers: 5% to 15% reduction
Time to find information: 75% to 90% reduction
Design errors: 10% to 25% reduction
Time-to-design: 15% to 70% reduction
Travel cost for design: 20% to 35% reduction

*Source: CIMdata*

**Customer Example (Legacy system to modern PLM):**



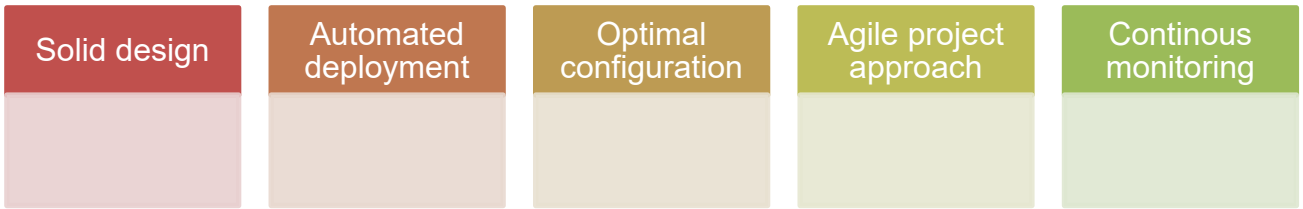

Total savings: **60.000** man hours pr. year!

| Task # | Task Description | Legacy PDM (min.) | 3DD - Ph2A (min.) | Target for 3DD Go-Live (min.) | Min SUS 3DD Score - Go-Live | Activities Per Year | Time Improvement per activity | Total Time PDM (hrs) | Total Time 3DD Go-Live (hrs) | Total Time Saved (hrs) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Requestor to Create One New Part, Two Dash Numbers, Create Design Work Request, and Submit | 7.5 | 10 | 5 | 75 | 10,000 | 3 | 1,250 | 833 | 417 |
| 2 | Global Design Planner activity | 1.5 | 5.5 | 0.5 | 70 | 10,000 | 1 | 250 | 83 | 167 |
| 3 | Local Design Palnner activity | 0.5 | 4.5 | 0.5 | 70 | 10,000 | 0 | 83 | 83 | 0 |
| 4 | Designer Time to Route a Drawing & Model for Review | 8 | 18 | 2 | 70 | 10,000 | 6 | 1,333 | 333 | 1,000 |
| 5 | Requestor Drawing and Solid Model Review and Feedback (assumes 1 rework loop) | 16 | 12 | 10 | 75 | 40,000 | 6 | 10,667 | 6,667 | 4,000 |
| 6 | Config Control Time to Release 3D and 2D Drawing | 12 | 21 | 4 | 70 | 12,000 | 8 | 2,400 | 800 | 1,600 |
| 7 | Requestor Create a Turbocharger Production Release Request | 94 | 126 | 45 | 75 | 500 | 49 | 783 | 375 | 408 |
| 8 | Configuration Control Time on Task to Review Turbocharger Production Release Request and Route for Approval | 67 | 102 | 50 | 70 | 500 | 17 | 558 | 417 | 142 |
| 9 | Turbocharger Production Release Request Review Time (X-Func Team) | 8 | 7 | 4 | 75 | 500 | 4 | 67 | 33 | 33 |
| 10 | Config Control Time on Task to Implement Turbocharger Production Release Upon Approval | 119 | 185 | 60 | 70 | 500 | 59 | 992 | 500 | 492 |
| 11 | Stop Order Implementation (Creation + Effort to Implement) | 76 | 119 | 60 | 70 | 25 | 16 | 32 | 25 | 7 |
| 12 | Engineering Order Creation Time | 129 | 170 | 60 | 75 | 25 | 69 | 54 | 25 | 29 |
| 13 | Lab Test Request Creation Time on Task (TI-056 Gas Stand Performance Test) | 54 | N/A | 20 | 80 | 3,000 | 34 | 2,700 | 1,000 | 1,700 |
| 14 | Lab Test Request Creation Time on Task (TI-221 Turbine Housing Thermal Cycle Test) | 74 | N/A | 20 | 80 | 200 | 54 | 247 | 67 | 180 |
| 15 | Lab Test Request Creation Time on Task (TI-357 Wheel HCF Light Probe Test) | 95 | N/A | 35 | 80 | 100 | 60 | 158 | 58 | 100 |
| 16 | Search for an Existing Part and Access 2D Drawing | 5.5 | 4.1 | 1.5 | 75 | 325,000 | 4 | 29,792 | 8,125 | 21,667 |
| 17 | Search for an Existing Part and Access Solid Model (new functionality) | 15 | 4.8 | 3.0 | 75 | 100,000 | 12 | 25,000 | 5,000 | 20,000 |
| 18 | Search and Access an EDI / QCI / and Engineering Report (total time for all 3 tasks) | 6.3 | 3.8 | 1.5 | 75 | 100,000 | 5 | 10,500 | 2,500 | 8,000 |
| | Averages | 43.8 | 52.8 | 21.2 | 73.9 | TOTAL | | 86,865 | 26,925 | 59,940 |

# Key Takeaways

- ✓ Only change if it adds value
- ✓ If you need to change – do it in a smart way!
- ✓ Always consider the lifecycle cost for a change
- ✓ Measure before and after

**Now – let's focus on how to do things right!**



# Q & A

**Value driven implementation**
How to choose the right problems to solve

Johannes Storvik
CTO, Head of CoE
johannes.storvik@technia.com

PLMIF

Innovation Forum

# DIGITALIZATION FOR SUSTAINABLE PRODUCT DEVELOPMENT AND MANUFACTURE