

Dr. Michael Jastram

Produktentwicklung
beschleunigen mit

Product Velocity



Michael Jastram

Dr. Michael Jastram

Systems Engineering & Product Velocity Innovator

Product Velocity

MIT Press, 2027



productvelocity.org

Inhalte

Blog | Webinare | Vorträge

- **Systems Engineering Trends**
10 Jahre wöchentliche News zu Systems Engineering
- **24.06., 11:00, Webinar**
Conway Drift erkennen und beheben
- **20.11., Tutorial beim TdSE**
Product Velocity für Systems Engineering

se-trends.de



Formal Mind GmbH

Geschäftsführer

Google



BOSCH



Mercedes-Benz



iauv



amun



CARIAD

mobileye



Sensata Technologies

formalmind.com



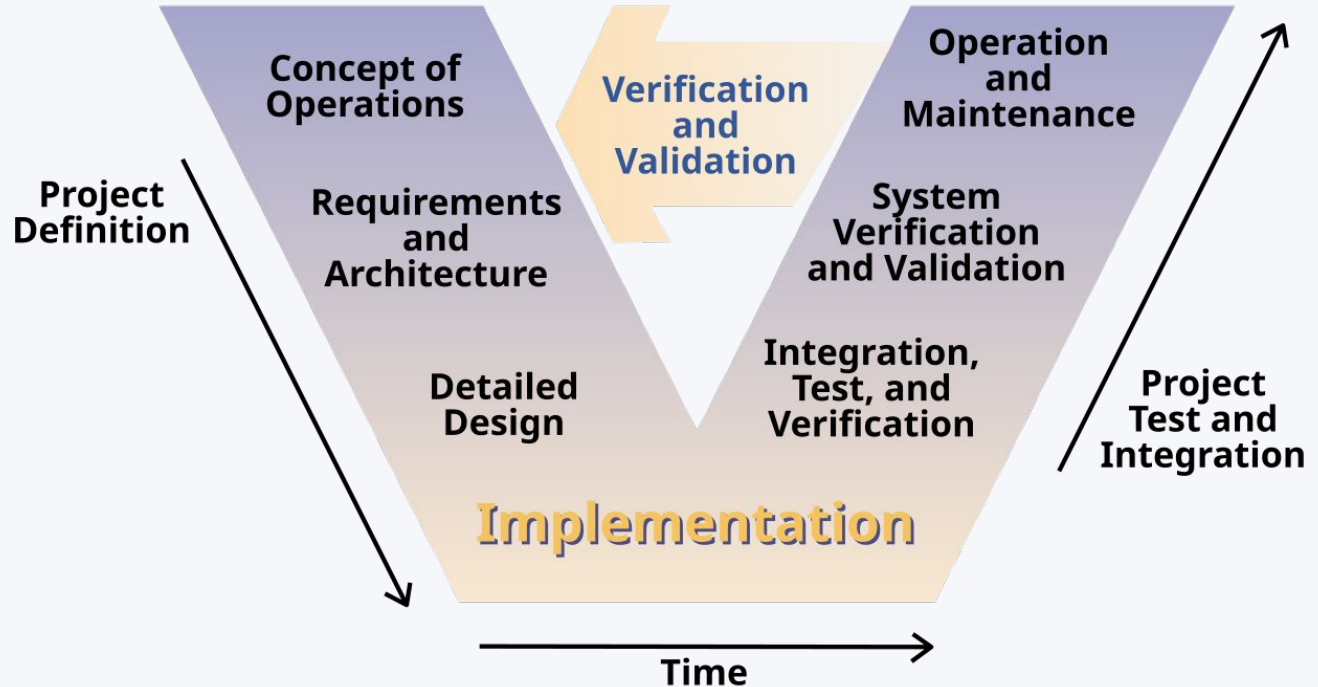
“Normalerweise benötigt die Automobilindustrie vier Jahre, um ein neues Auto zu entwickeln. Bei BYD beträgt unser Standard 18 Monate.”

Stella Li,
Executive vice president of BYD and
CEO of BYD Americas

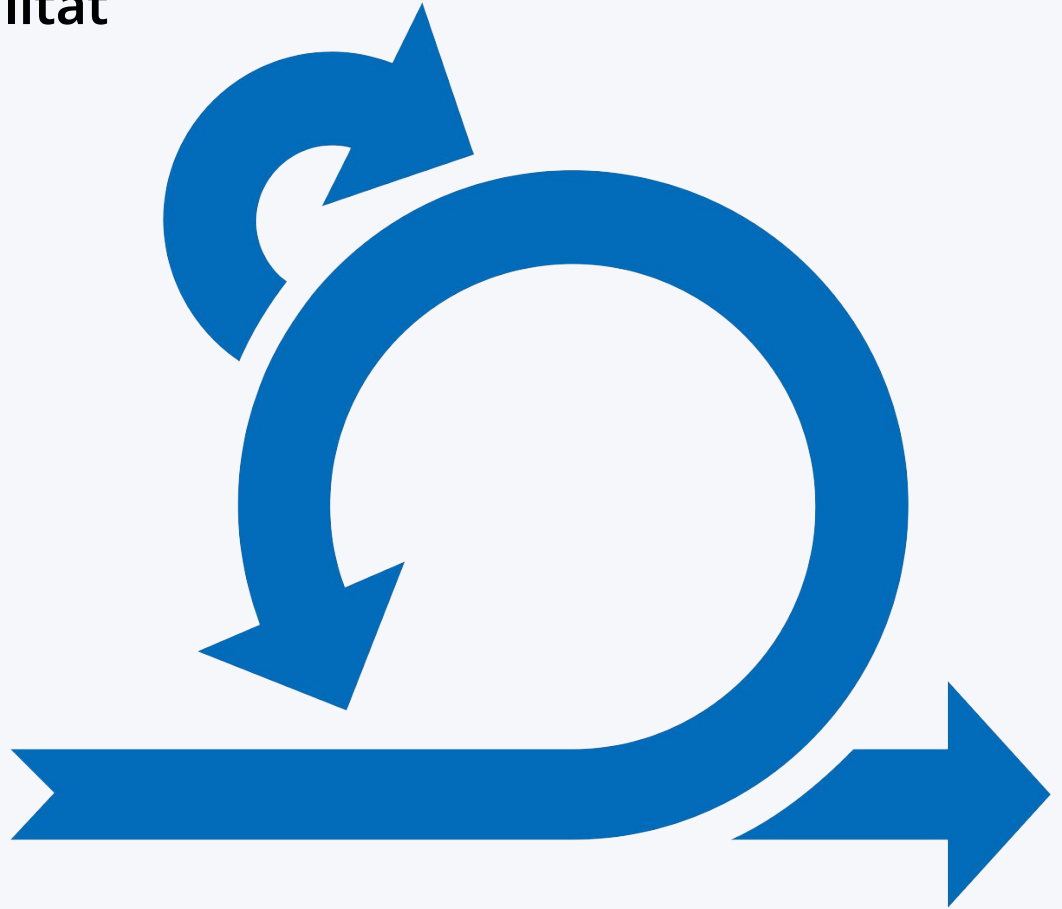
Was haben wir bisher ausprobiert?



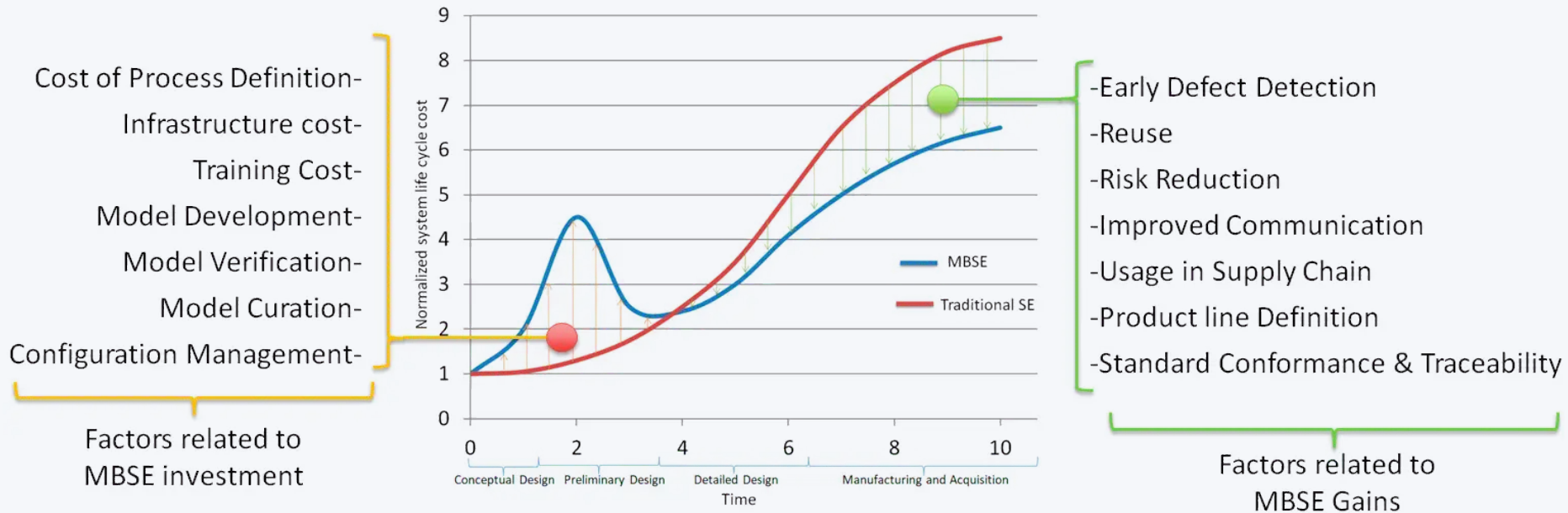
Systems Engineering



Agilität



Model-Based Systems Engineering



Warum moderne Produktentwicklung trotzdem langsam bleibt

Antworten von drei Experten



Prof. Dr.-Ing

Martin Eigner



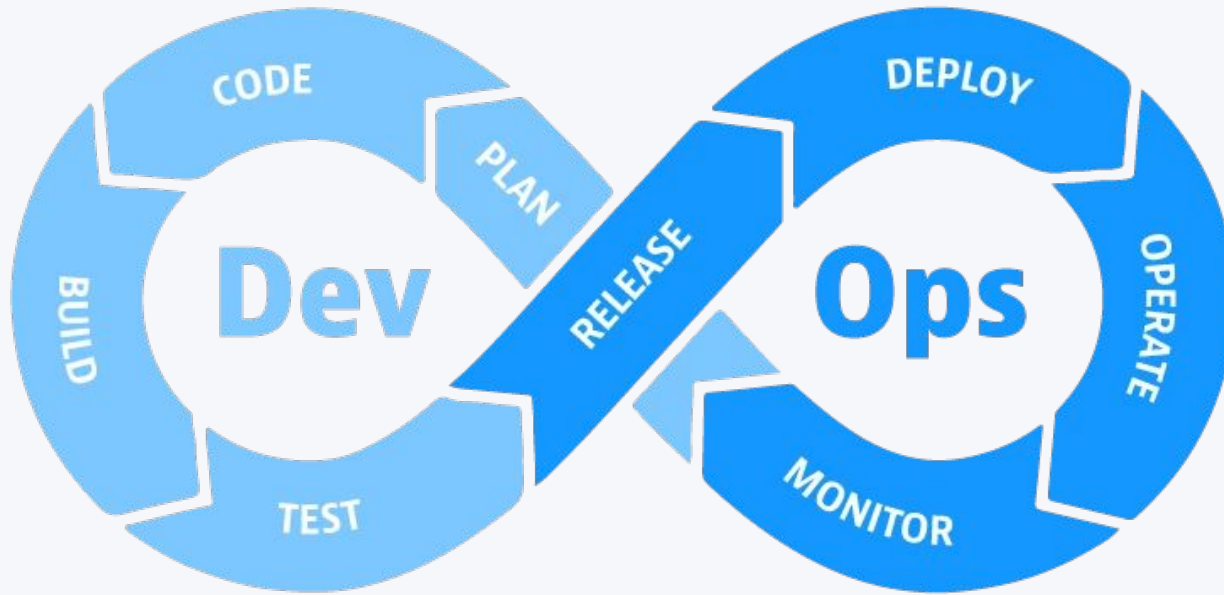
Joachim Pfeffer



Dr.

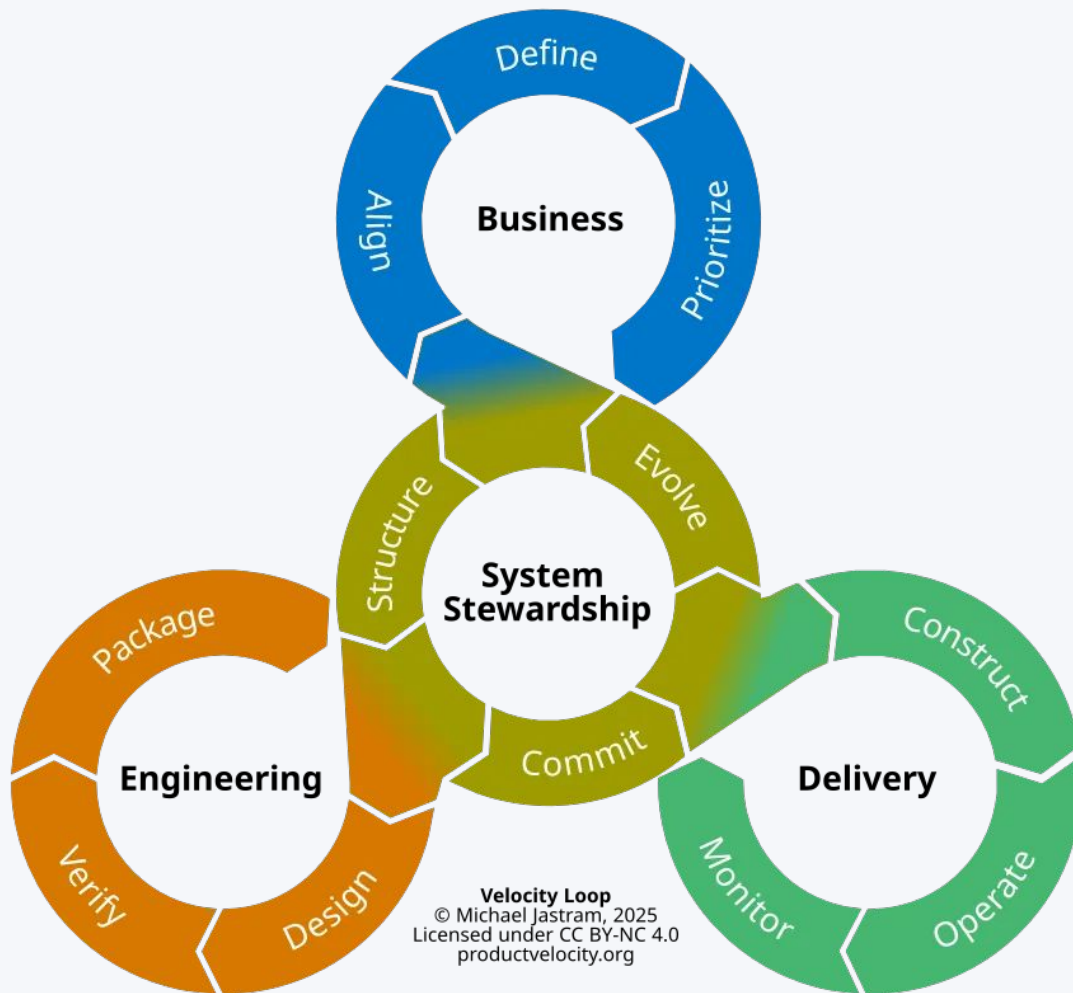
Michael Jastram

DevOps Loop: Betriebsmodell der Softwareentwicklung



Velocity Loop

DevOps Loop für
cyberphysikalische
Systeme

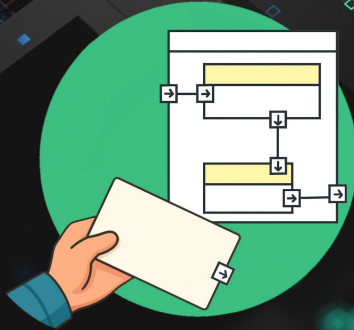


4 Prinzipien für Product Velocity

Define & Align:
**Value
Thinking**



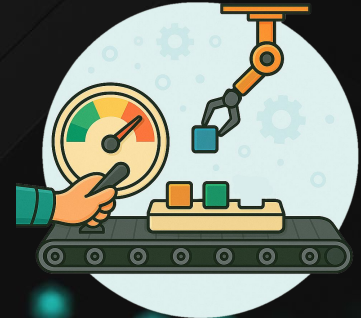
Design & Build:
**Architect
for Flow**



Integrate &
Validate:
Shift Left



Operate and
Evolve:
Accelerate



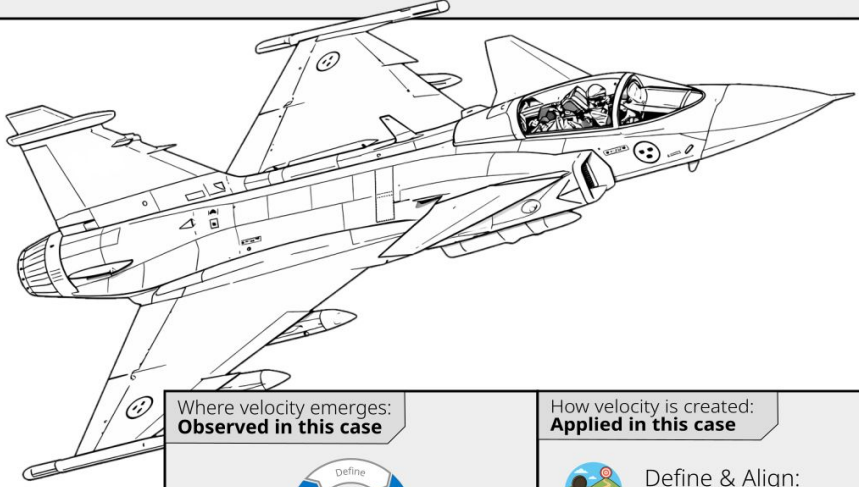
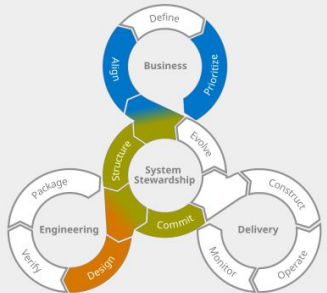


1. Prinzip:

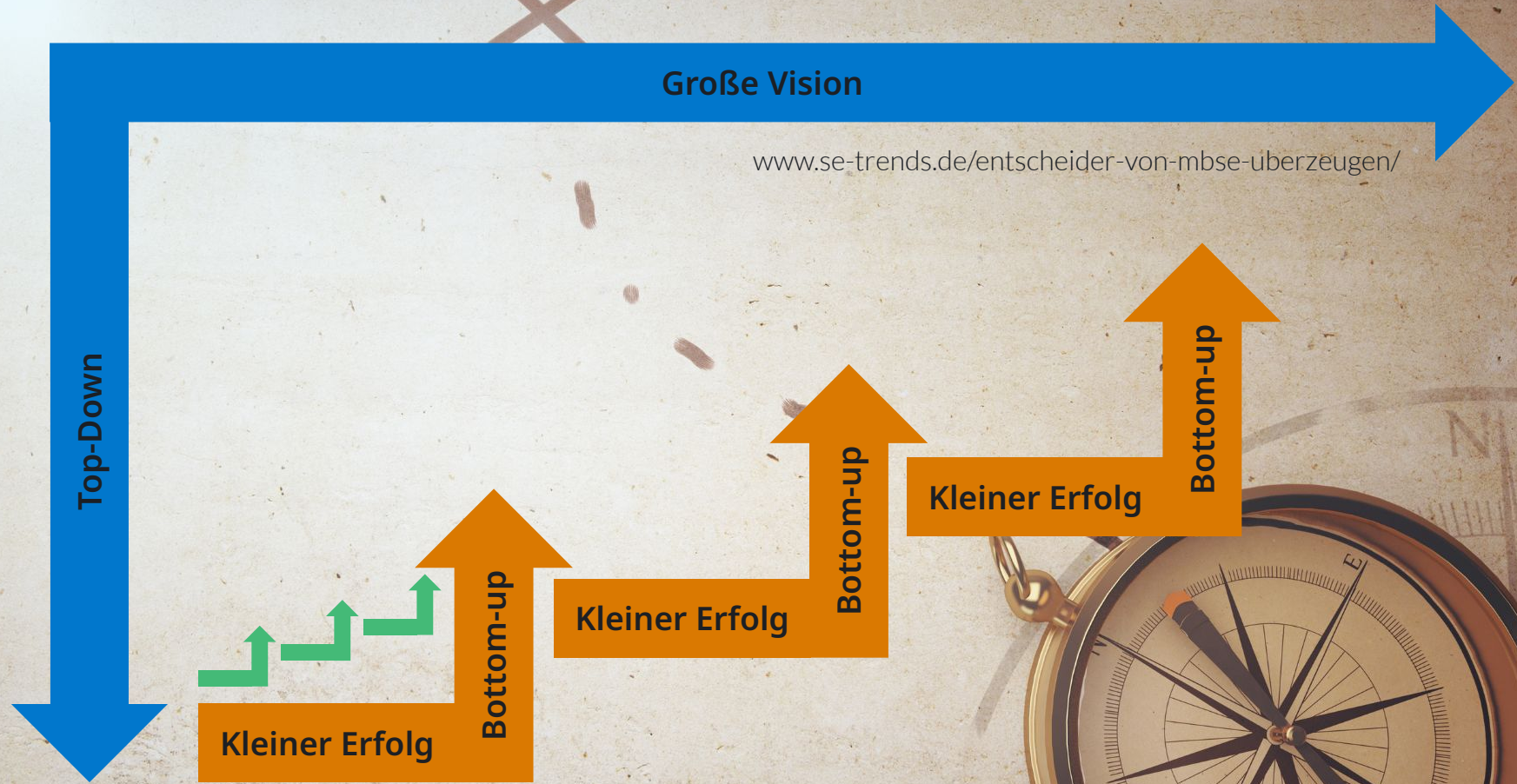
Value Thinking

Blocker innerhalb von einem Tag bis auf Vorstandsebene eskalieren

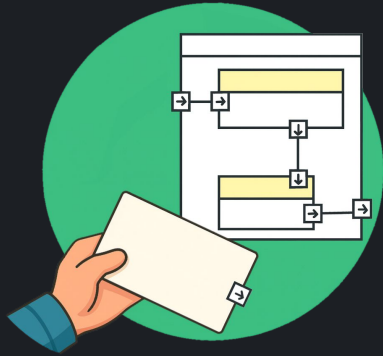
- 7:30 am Daily Scrum at the individual contributor/team level
- 7:45 am Scrum of Scrum
- 7:45 am Scrum of Scrum of Scrum
- 8:15 am Scrum of Scrum of Scrum of Scrum
- 8:30 am Executive Action Team

	1	2	3	4	5
A	productvelocity.org/case-studies/saab/escalation-chain Saab AB: Escalating Blockers in 60 Minutes By institutionalizing daily escalation, Saab eliminated decision latency				
B					
C					
D					
E	Where velocity emerges: Observed in this case		How velocity is created: Applied in this case		
					
	1	2	3	4	5

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productvelocity.org



www.se-trends.de/entscheider-von-mbse-überzeugen/



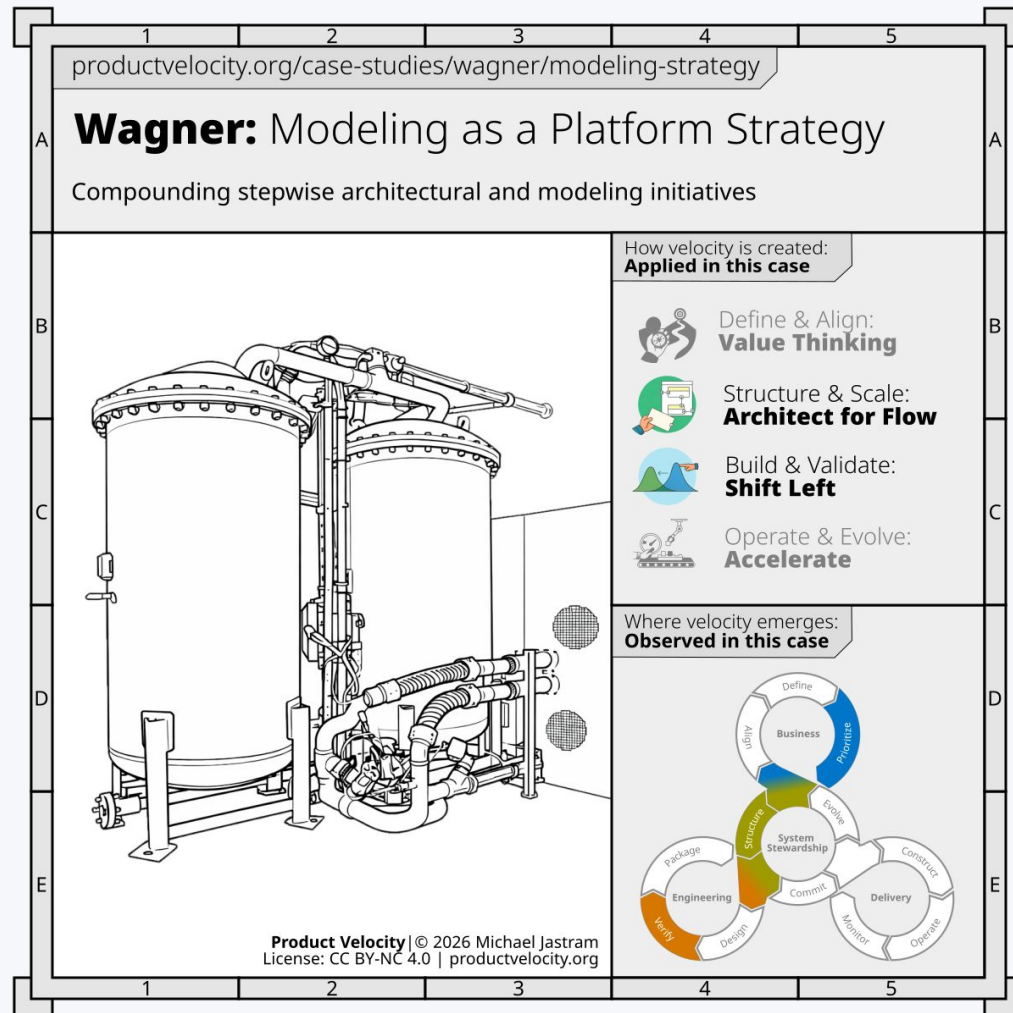
2. Prinzip:

Architect for Flow

TÜV-Abnahme auf Knopfdruck

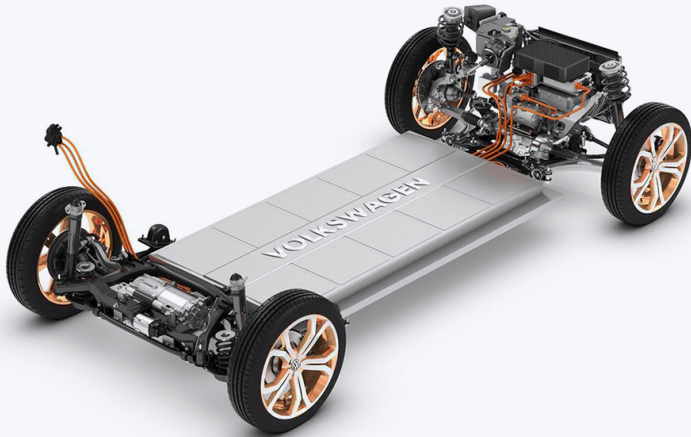
Kleine Schritte

- Spezifikation über MBSE
- Codegenerierung aus Modellen
- Zertifizierte Werkzeugkette
- Testraum
- Testraum-Zertifizierung

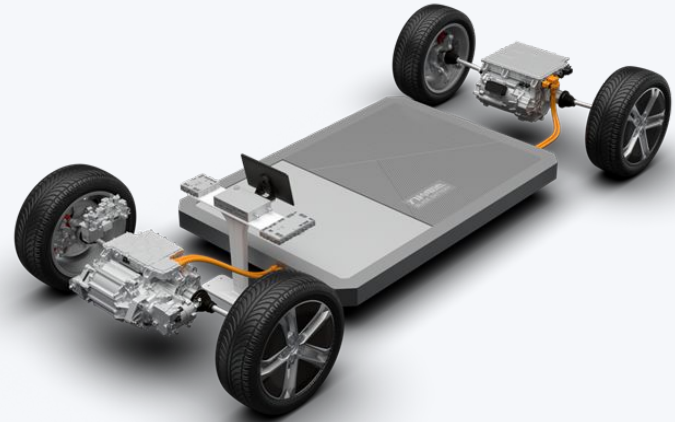


Der Trend geht zur Plattform-Architektur

VW MEB



BYD e-Plattform 3



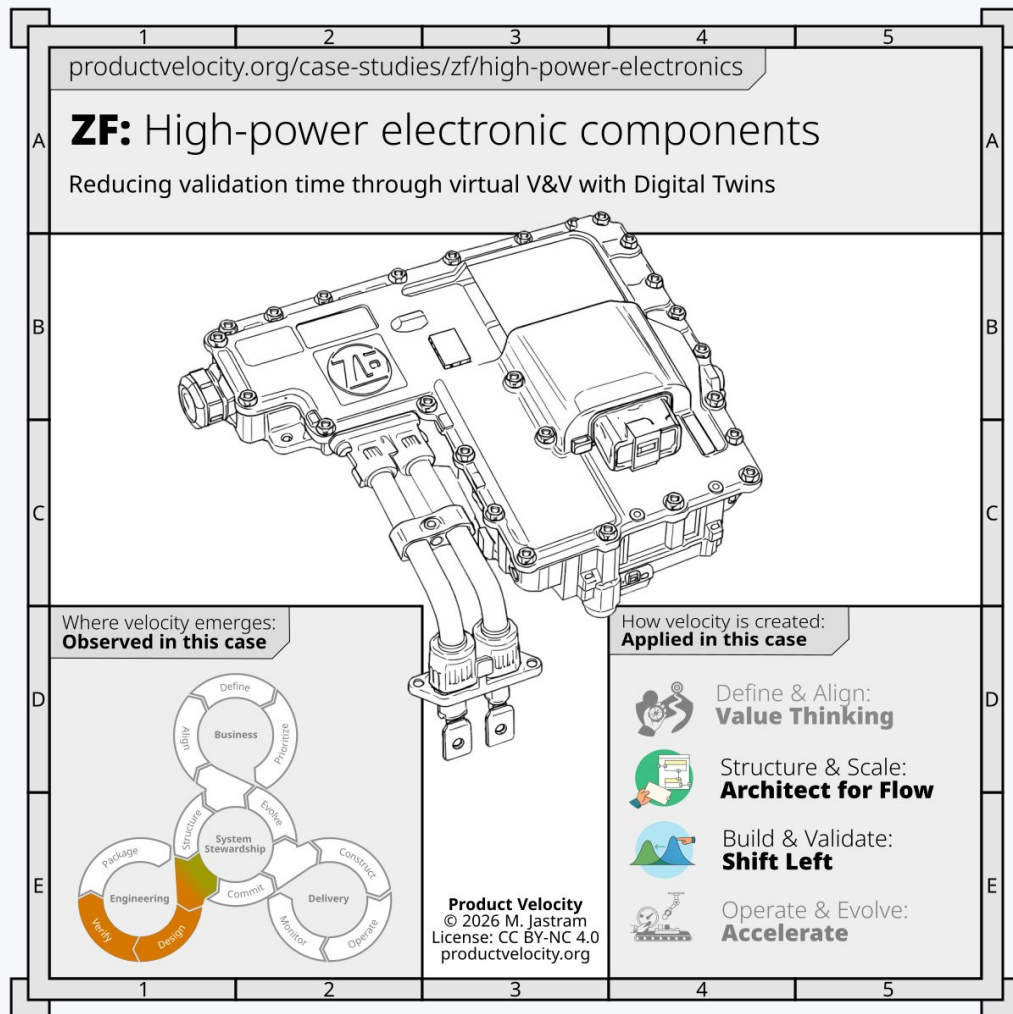


3. Prinzip:

Shift Left

Hochenergie-Halbleiter

Validierungszeit von 12 auf
2 Monate reduziert

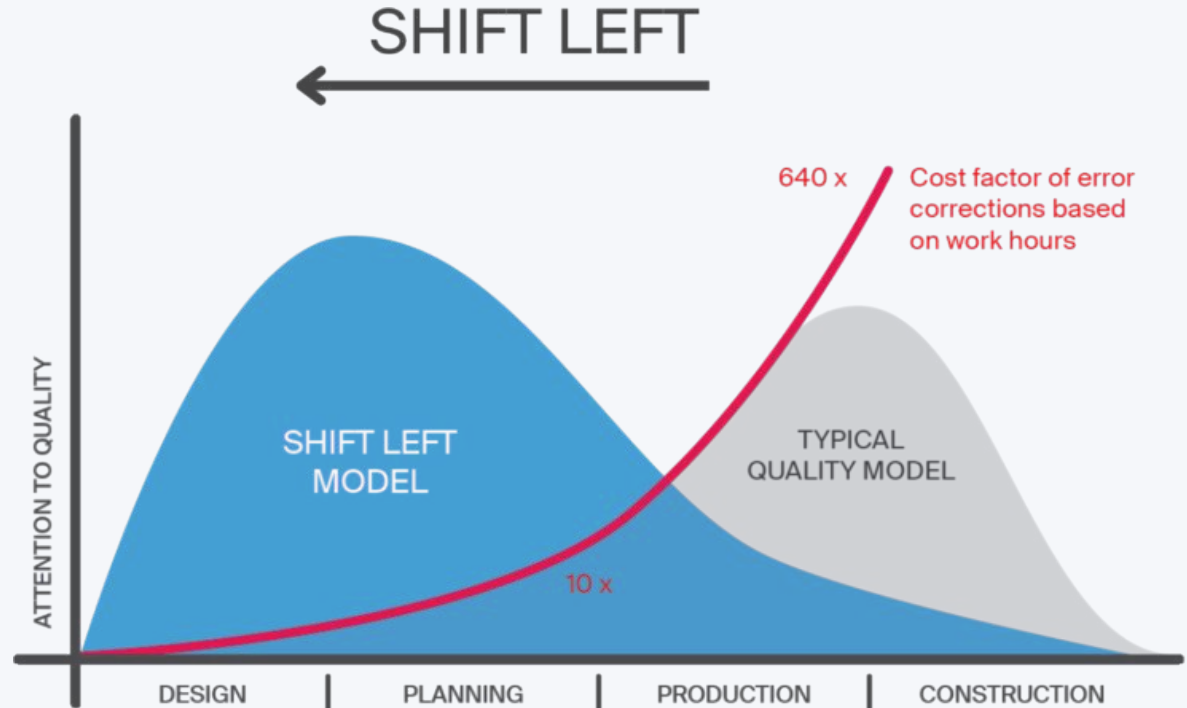


3. Prinzip

Shift Left



3. Prinzip: Shift Left



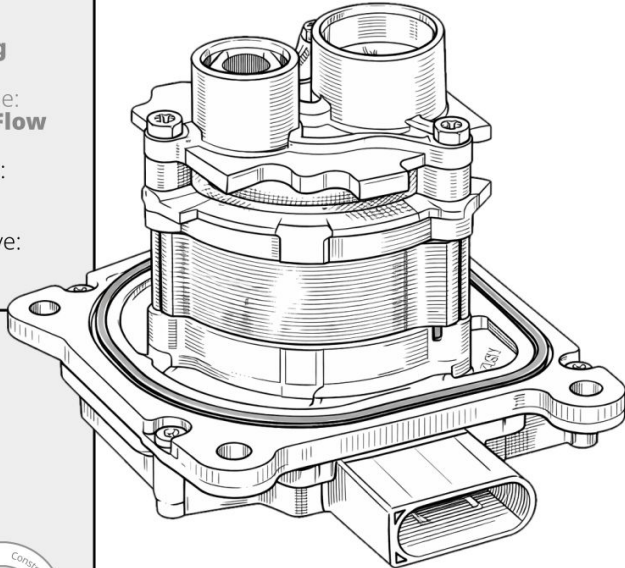
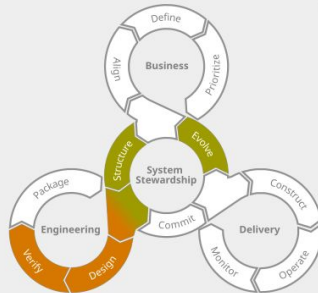


4. Prinzip:

Accelerate

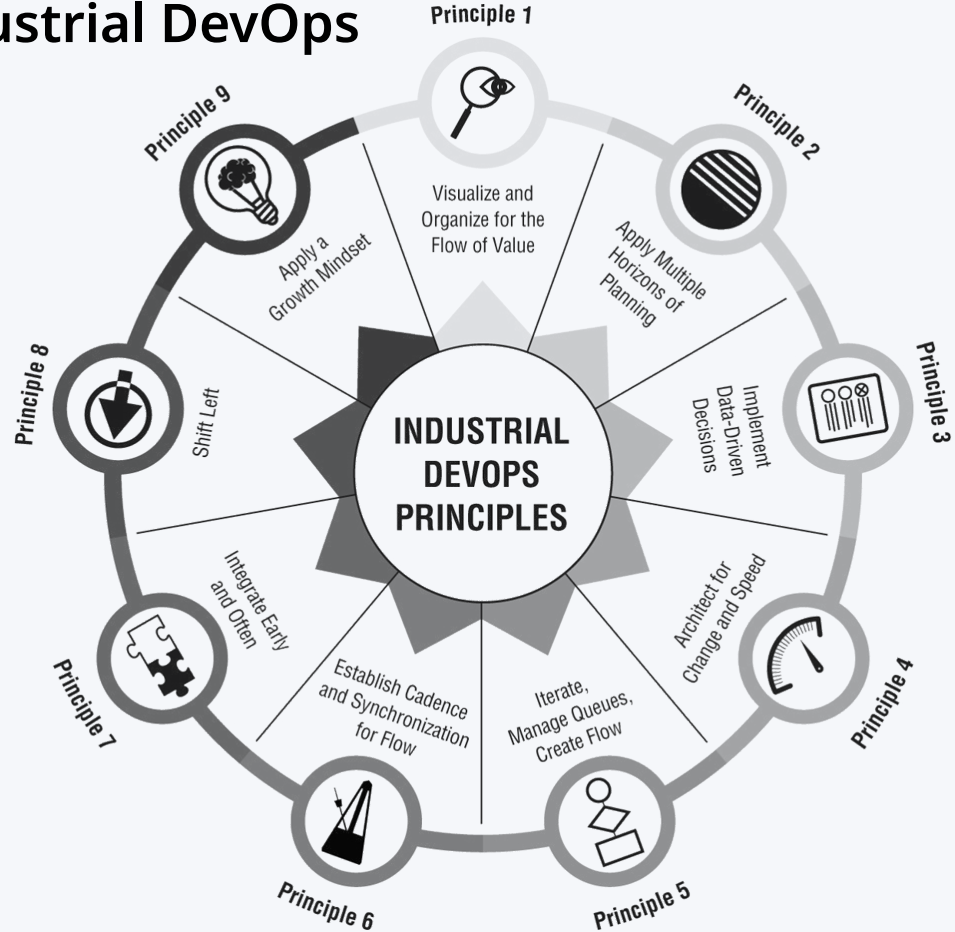
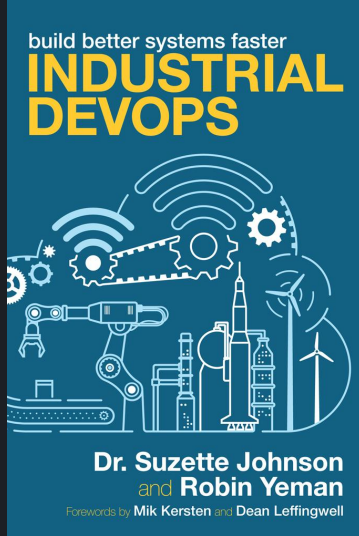
Design auf Knopfdruck

Design-Compiler erstellt
Pumpendesigns für
RFQ-Anfragen auf Knopfdruck

	1	2	3	4	5
	productvelocity.org/case-studies/shw/oil-pump				
A	SHW Auto: Electric Oil Pump Development Validated simulation reduced late-stage testing and cut development cycles from weeks to days.				
B	How velocity is created: Applied in this case  Define & Align: Value Thinking  Structure & Scale: Architect for Flow  Build & Validate: Shift Left  Operate & Evolve: Accelerate				
C					
D	Where velocity emerges: Observed in this case 				
E					

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Industrial DevOps

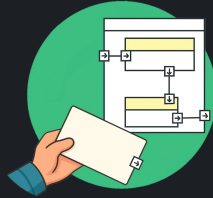


4 Prinzipien

Define & Align:
Value Thinking



Design & Build:
Architect for Flow



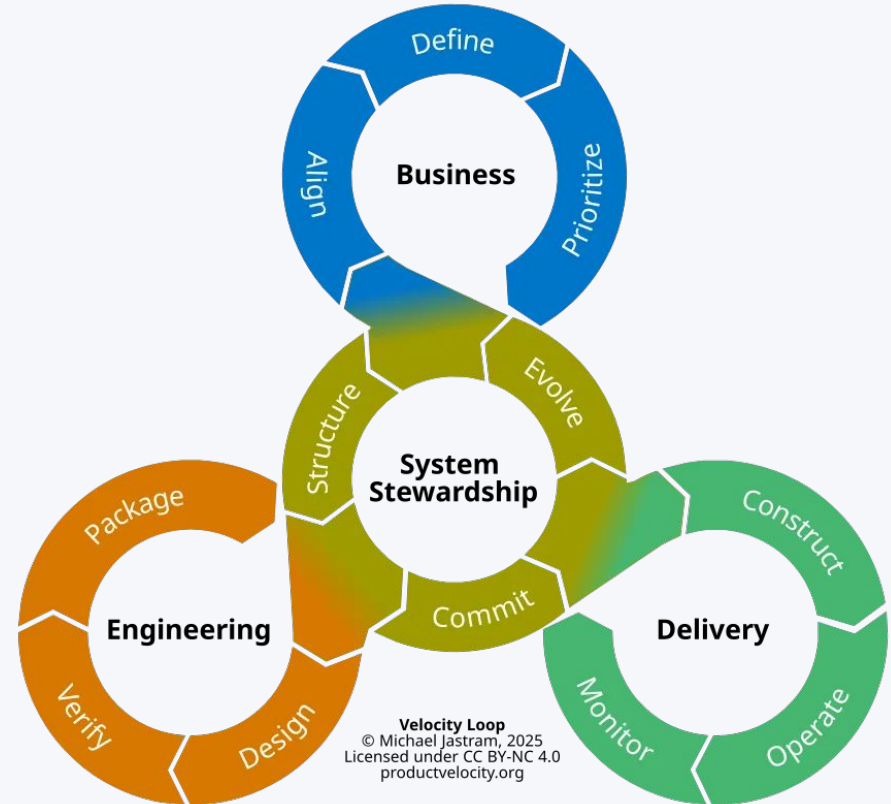
Integrate & Validate:
Shift Left



Operate and Evolve:
Accelerate



Velocity Loop



Diskussions- runde

Fragen über
Chat stellen

