



welcome

*the performance of technology*

# Track & trace als maatwerk software

**Effectief, efficiënt én  
kostengunstig**

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## international engineering firm global clients & projects



**850**  
passionate  
employees



**12**  
branches



**>50 years**  
family business

We help industrial organizations to perform better by combining capacity and flexibility with expertise and innovation.

# The Case

## New automotive product, proto assembly line

- About 25 assembly steps
- About 500 products to be assembled in 9 months
- Customer requires full track & trace (who, when, with what parts, inspection result, ...)
- T&T needs to be up and running in 5 weeks after first contact
- Prototype line; procedure is subject to change



# Analogy

**Your need = blocks**

**Software solution = stove**

Let's play!



# Analogy

**Your need = blocks**

**Software solution = stove**

Let's play!

But what if...



# To make things fit

## Adapt the blocks

Modify your own organisation such that your need fits the software solution

For the case at hand: no go



# To make things fit

## Adapt the stove

Modify the software solution

- Make new holes
- Use a large hole + adapters

For the case at hand: no go





# To make things fit

## Use an adaptable stove!

Custom software



# Off-the-shelf solution

- A lot of functionality -> **Feature rich**
- Many users, hence little errors -> **Mature**
- Help desk, tips & tricks on internet -> **Supported**
- When not niche product: trusted supplier -> **Acceptable dependance**
- Everything known about the product -> **Compliance**

Central thought:

Match your organisation to the

Way of Working of the solution



# Custom software

Central thought is reversed:

Match your software to the

Way of Working of the organisation

This is attractive for processes that are company-core

What can we do to retain the attractive features of off-the-shelf solutions?



# How to retain the nice features with custom software

## Feature rich

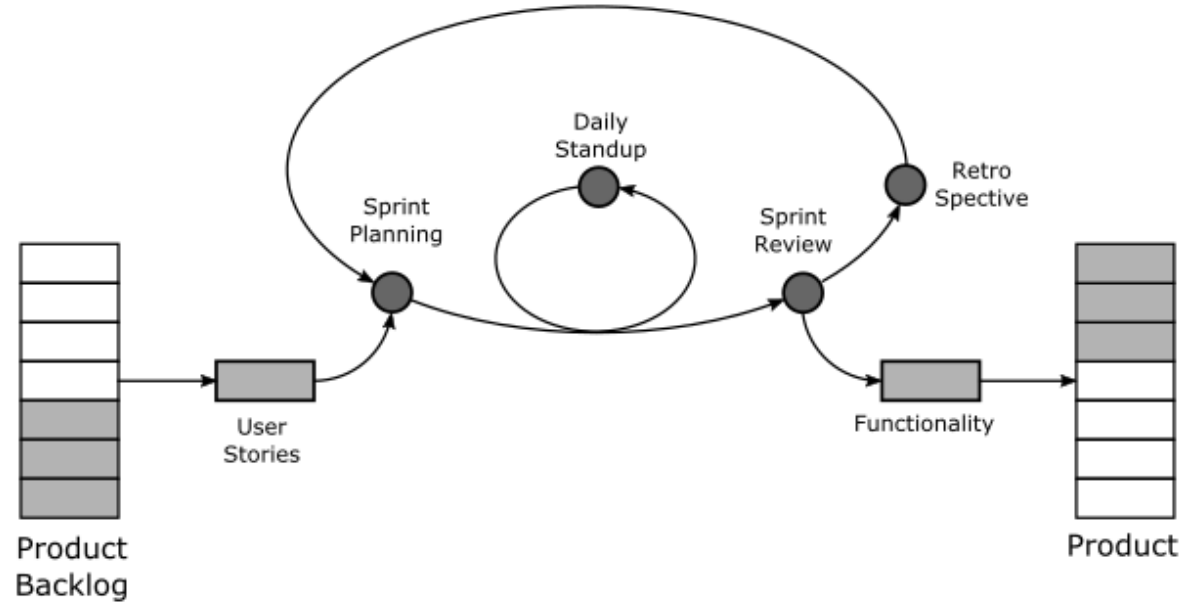
- Connect and cooperate with other applications
- No feature creep!  
Minimal is better than bloated  
(user experience & €)



# How to retain the nice features with custom software

## Feature rich

- Connect and cooperate with other applications
- No feature creep!  
Minimal is better than bloated  
(user experience & €)
- Use an agile approach and learn on the way



# How to retain the nice features with custom software

## Mature

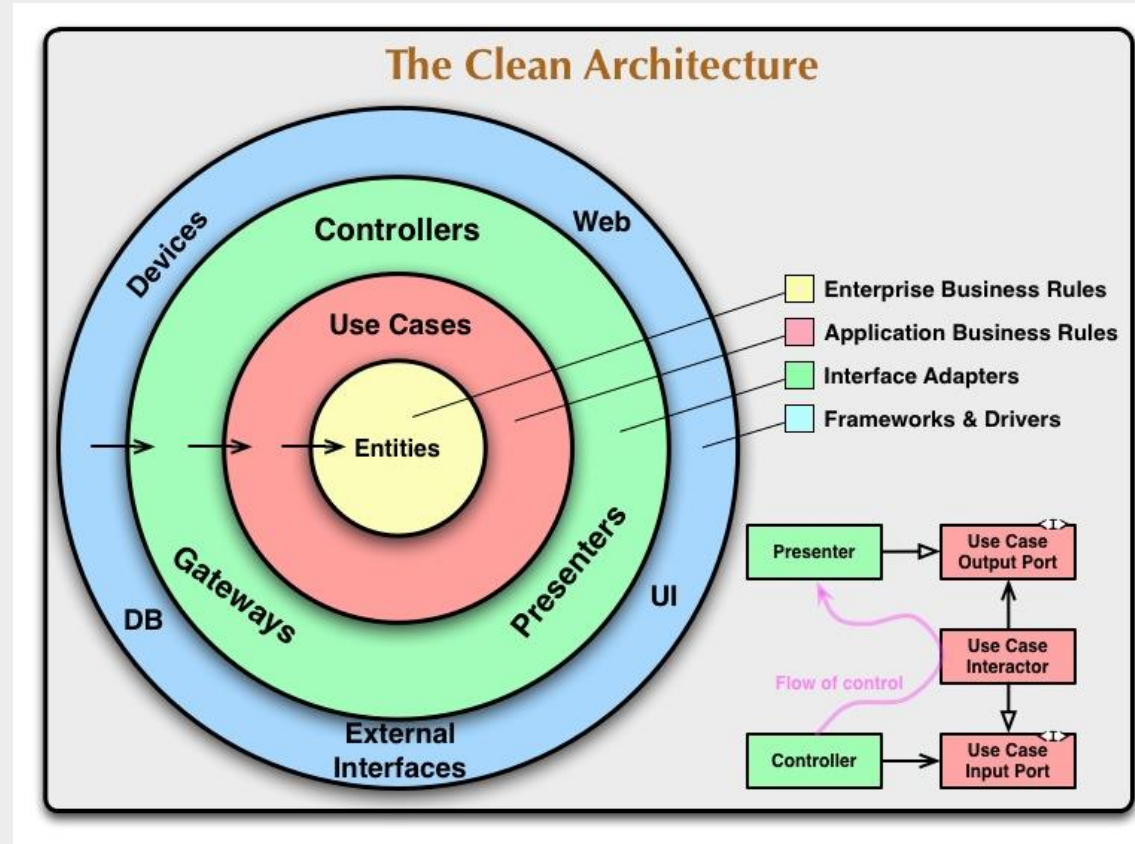
- Build on main stream (open source) libraries, frameworks, etc.
- Have a thorough testing and QA process in place
- Release Early, Release Often
- Modular software architecture that enhances reuse



# How to retain the nice features with custom software

## Mature

- Build on main stream (open source) libraries, frameworks, etc.
- Have a thorough testing and QA process in place
- Release Early, Release Often
- Modular software architecture that enhances reuse  
(Clean architecture:  
<https://blog.cleancoder.com/uncle-bob/2012/08/13/the-clean-architecture.html>)



# How to retain the nice features with custom software

## Support & Dependence

- Source code + design documentation transferred with application delivery
- Make use of main stream technology
- Have a support plan (with upgrading) and a [support process](#)
- Appoint an owner (group)
- Involve IT early





# What about the Case

## New automotive product, proto assembly line

- First proto in 2 weeks;  
All necessary functions in 5 weeks;  
followed by 2 weeks of tweaking
- Operators really like the solution
- Customer of our customer happy with the T&T
- Now being extended to run on additional lines
- Most heard request: cooperation with other systems (purchasing)
- Biggest hurdle: IT involvement



# Take home message

## Custom software: when it is better to adapt the software solution to the WoW of your organisation

Measures can be taken to retain the attractive features of off-the-shelf solutions

- Feature set
- Maturity
- Support
- Dependence
- Compliance



# Questions





**Software  
Mechatronics  
Smart Industry**

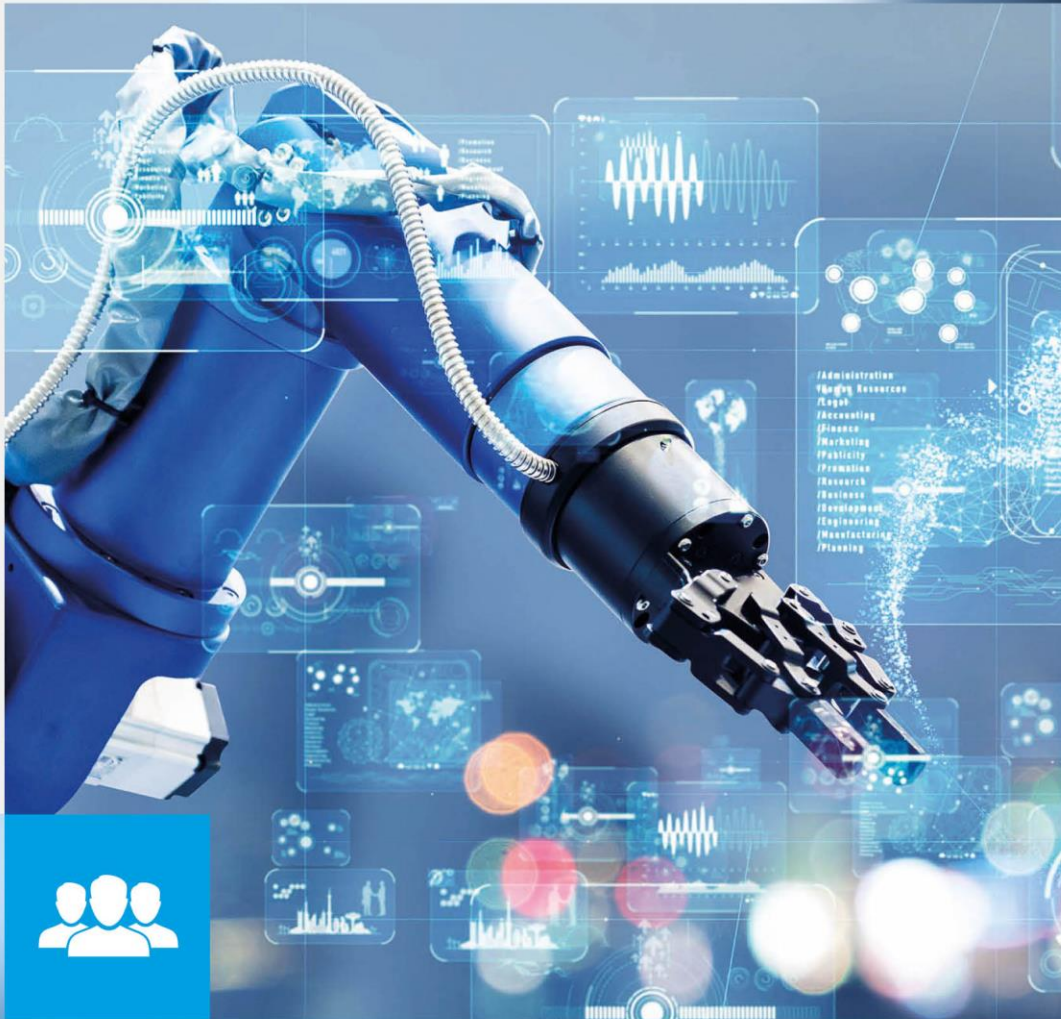
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We are **specialized in Product Engineering, Mechanical Engineering and Industrial Projects**. Within this we focus on engineering and project management. With a decisive combination of expertise and experience, we help our customers to push the boundaries and improve performance. We do this internationally, with offices in the Netherlands, Belgium and Germany.

# success through cooperation



# our promises

