

CAMPIONE

Condition-Based Maintenance for the Process Industry – Open Network Environment

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12 oktober 2017



Breng uw data tot leven!

 **ACTEMIUM**  **axians**



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Uitkomst WCM Summer School: modulaire Marine-fregatten


Ik kom naar het WCM Jaarevent op 31 oktober 2017


Upcoming

OKT 12

Reliability Excellence:
Maximizing the capability and capacity of your assets

OKT 12

Assetmanagement NL: I AM
the future

Productiviteit in maintenance verhogen met nieuwe app


Next step voor 100% voorspelbaar onderhoud 'waterinfra'


Boek over de waarde van onderhoud: Je Maintiendrai


Twitter

Tweets door @WorldClassMaint

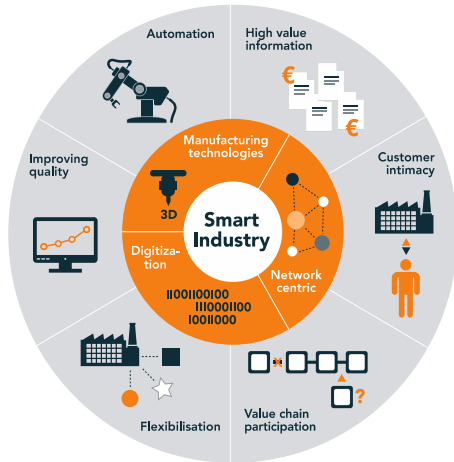


WCM
@WorldClassMaint

Groeien de rol voor technisch dienstverleners in NL industrie:
[bit.ly/2fONh1p](#) #smartmaintenance #servitization #digitalfuture

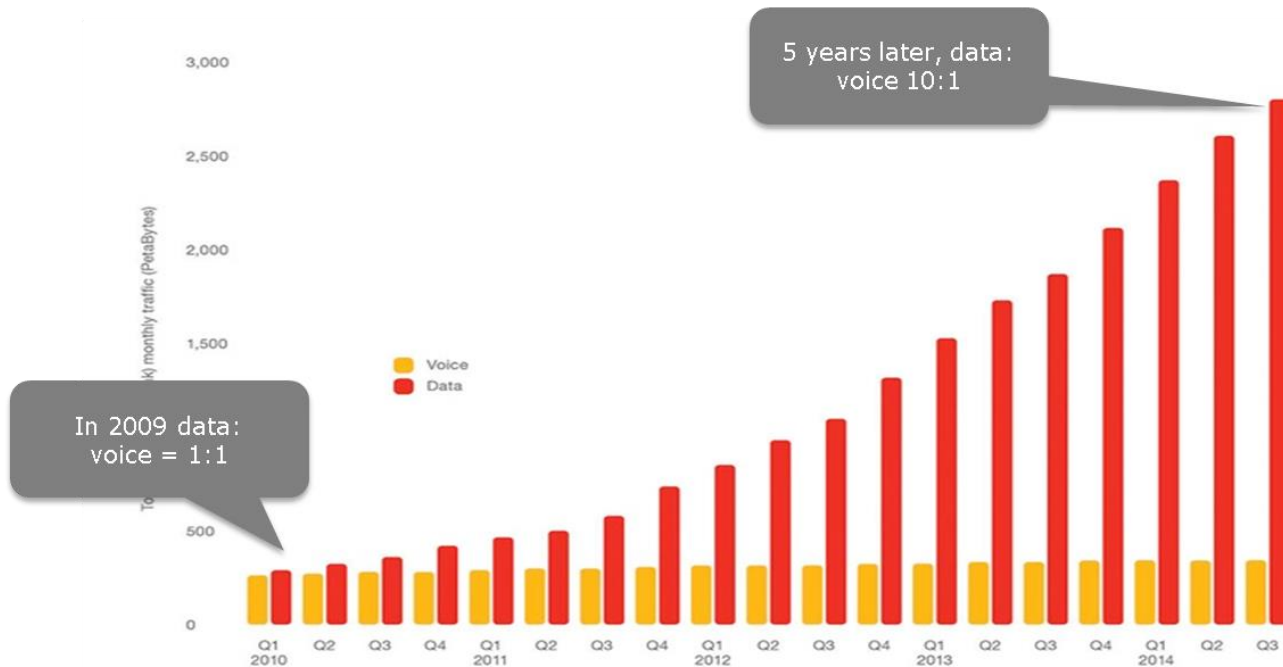
Boschstraat 35 Breda | Zilverstraat 69 Zoetermeer | Ericssonstraat 2 Gilze Rijen | Warandelaan 2 Tilburg | 076 76 31 553







Exponential growth of use of data



*[Bron: Ericsson August 2014](#)

“DATA PRODUCTION Will be 44 TIMES greater in 2020 than it was in 2009”





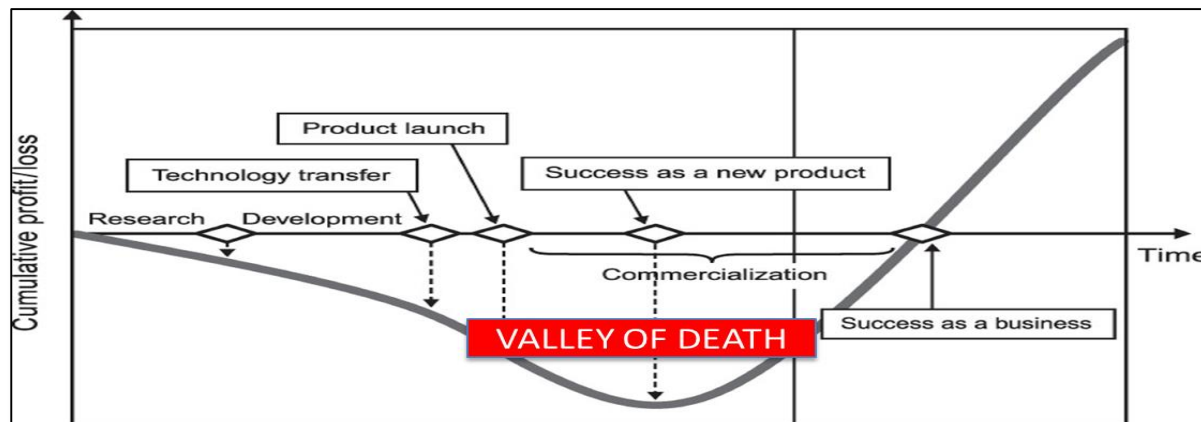
- 100% voorspelbaar onderhoud
- Via Smart Industry technieken en methodieken
- Stimulans economie (incl. export), duurzaamheid en veiligheid

Wat is er nodig

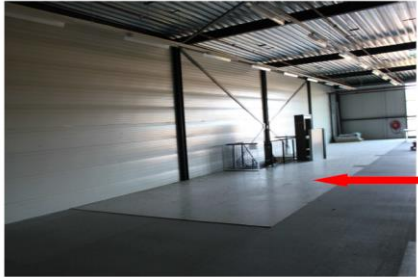
- Promotie
- Training en opleidingen
- Proeftuin
- Research



Valley of Death



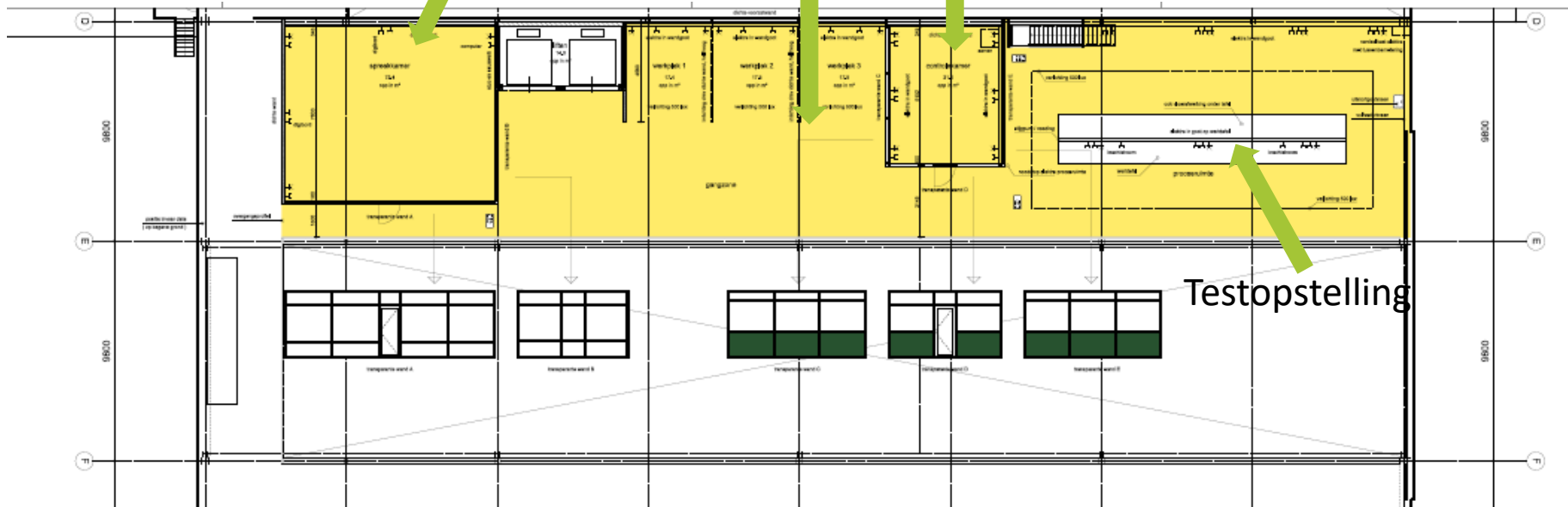
Fieldlab



Meeting room

Control room

Incubator

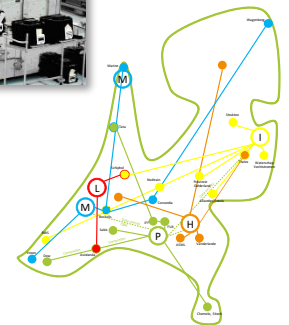


Testopstelling

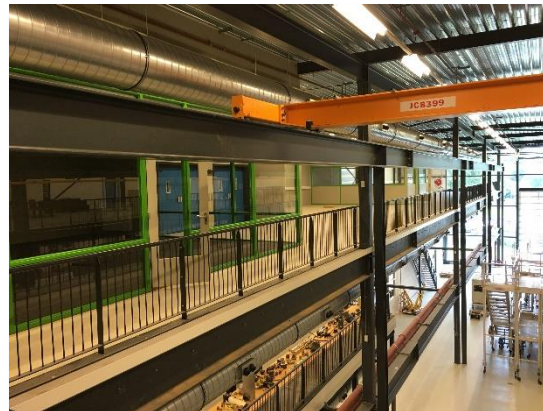




Towards zero downtime

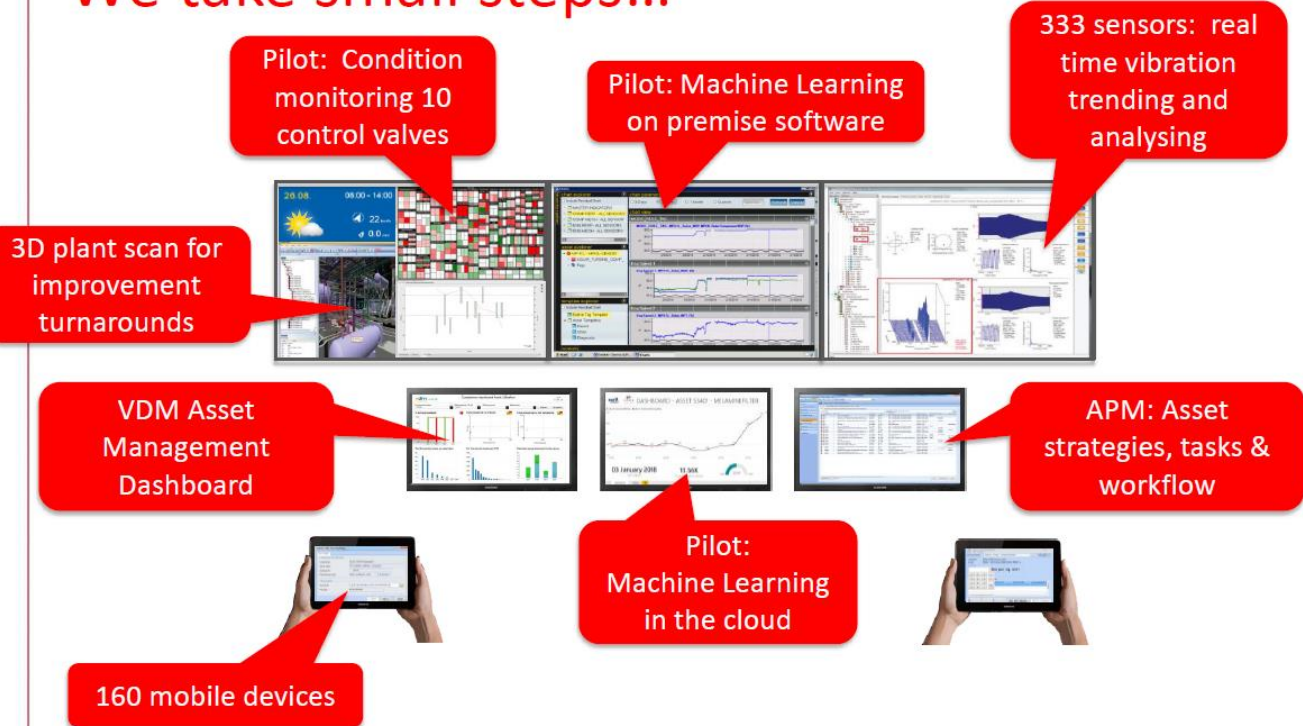


- Living Lab Sitech Live
- Living Lab Fuji Live
- DAFlab Live
- Asset Health Center Sitech gerealiseerd
- Opening Project Office CAMPIONE op TiU
- Vele werksessies, bezoeken van delegaties
- Uitwisseling tussen asset owners
- Wisselwerking Living Labs en team/Fieldlab



Eerste resultaten

We take small steps...



- Asset Health Center
- Pilots met verschillende SI technologieën en methodieken (data driven, model based)
- Business cases



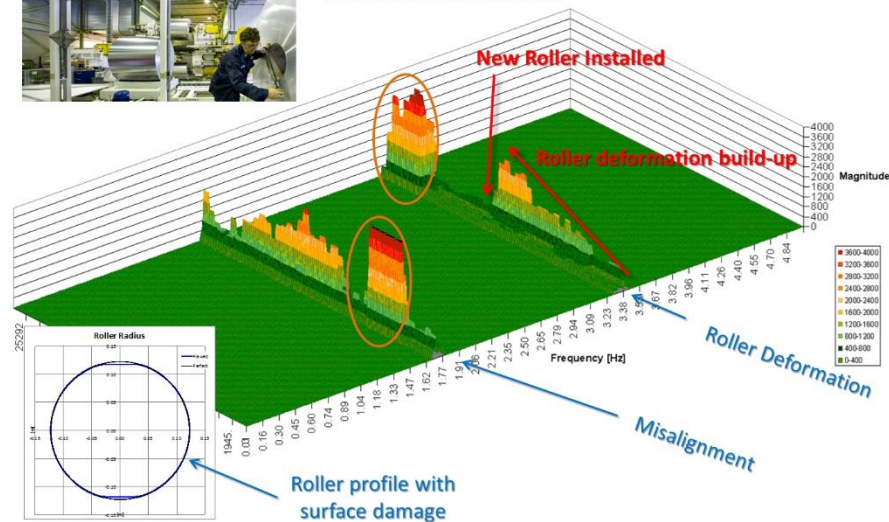
Livinglabs Sitech



Online Roller Condition Monitor System Data



M621 Roller Speed Frequency vs Time



Digitized Field Checks with handheld



"The IMMS System is the core to manage the maintenance actions on the rollers including inspections, to record the maintenance inspection data and to manage roller replacements. Preventative maintenance management is performed in IMMS using integrated information from the Online Roller Health Monitor System prediction models based on inputs from the DCS MV monitoring system and Online Vibration Monitor System"

Background

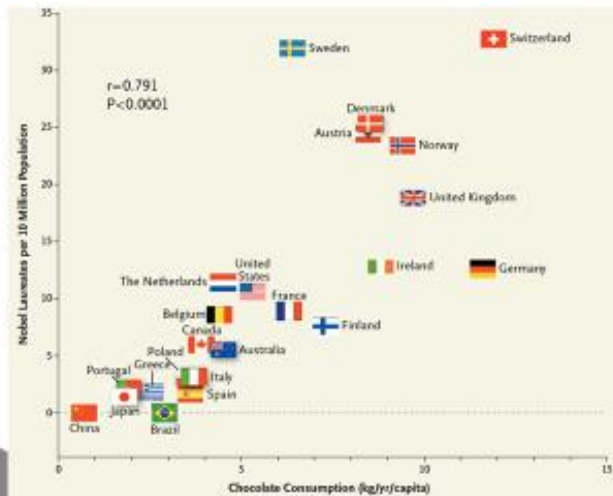
- IMMS provides a cloud based integrated Maintenance Management Solution using input from preventative maintenance models and sensors.
- Inspections are performed using IMMS Android based Tablets
- Selected problematic rollers already barcoded
- Scheduled maintenance procedures already in place for problematic barcoded roller inspections.



- Roller management
- Digitized maintenance
- 2 andere pilots; uitwisseling met Sitech

Conclusies & Lessons Learned

Statistics are nice, but also experience and context are needed



Model based – degradatie modellen – data driven – statistiek -

CAMPIONE heeft alle smaken • En is uniek met big data *en* CBM (ref. PHM Society 2016) • Ook uniek: wij hebben data *en* modellen CBM (ref. PHM Society 2016)

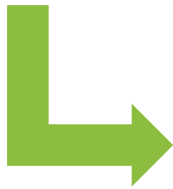
Conclusies & Lessons Learned

- Onderwijs mooie rol
- CBM niks nieuws; maar bottlenecks overbruggen we.
- 'Just do it'. Maar wel met juiste route (maintenance, corporate, IT).
- Win-Win business case
- Veel smaken Big Data
- Wij uniek met big data *en* CBM (ref. PHM 2016)
- Wij hebben data; ook uniek (same for DAISY)

Mensen, mensen, mensen



Breng uw data tot leven!



- Business Case
- Verbinden klassieke onderhoudswereld met de nieuwe wereld van big data