BIG DATA -

IMPROVING UPTIME OF AUTOMATED CONTAINER HANDLING

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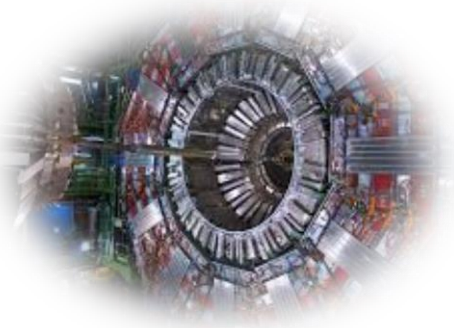
BIG DATA: IS BIGGER ALWAYS BETTER – AND HOW MUCH IS ENOUGH?

gigabyte
terabyte
petabyte
exabyte
zettabyte



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GOOD QUALITY
RELEVANT
VERSATILE
ACTIONABLE
ACCESSIBLE

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DATA IS THE NEW OIL.

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DATA MUST BE REFINED TO BE OF VALUE

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TRADITIONAL BUSINESS PRACTICES GENERATE DISPOSABLE DATA INSTEAD OF REUSABLE DATA

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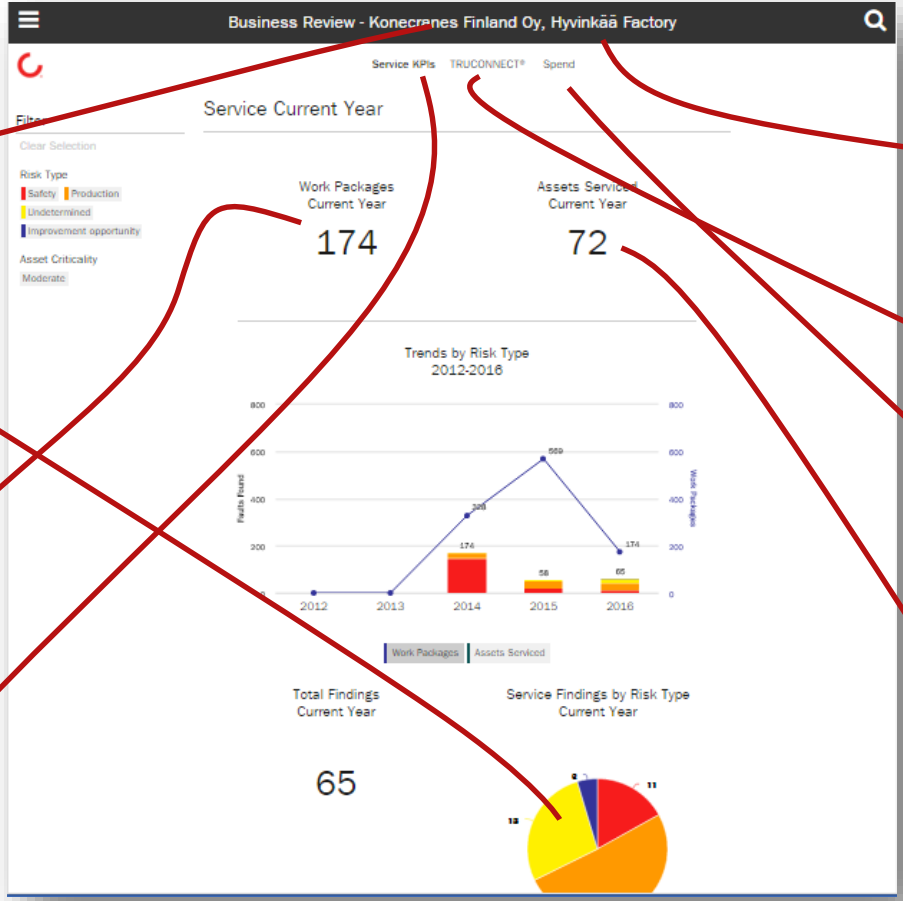

Customer master

Customer hierarchy

Observations made by technicians

Observations made by asset

Enterprise CM data

Invoicing data

Service product master

Contract master

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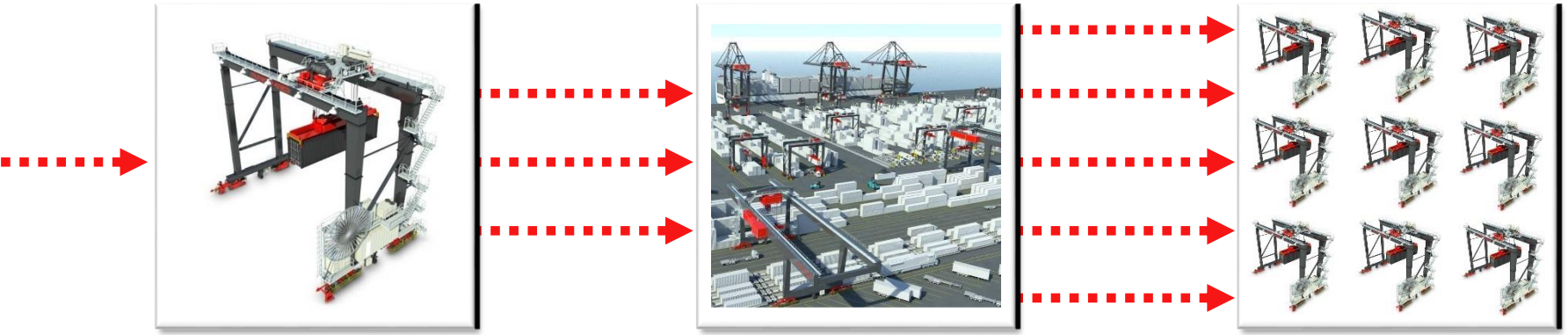
WHEN HARVESTED
APPROPRIATELY,
DATA MATURES LIKE
GOOD WINE

BUT IF NOT ENJOYED FRESH, ONLY PART OF THE VALUE REMAINS



EDGE ANALYTICS
STREAMING
REACTIVE
PREDICTIVE

SITE ANALYTICS
ONLINE
DESCRIPTIVE
DIAGNOSTIC

FLEET ANALYTICS
OFFLINE
PRESCRIPTIVE
INSIGHTFUL

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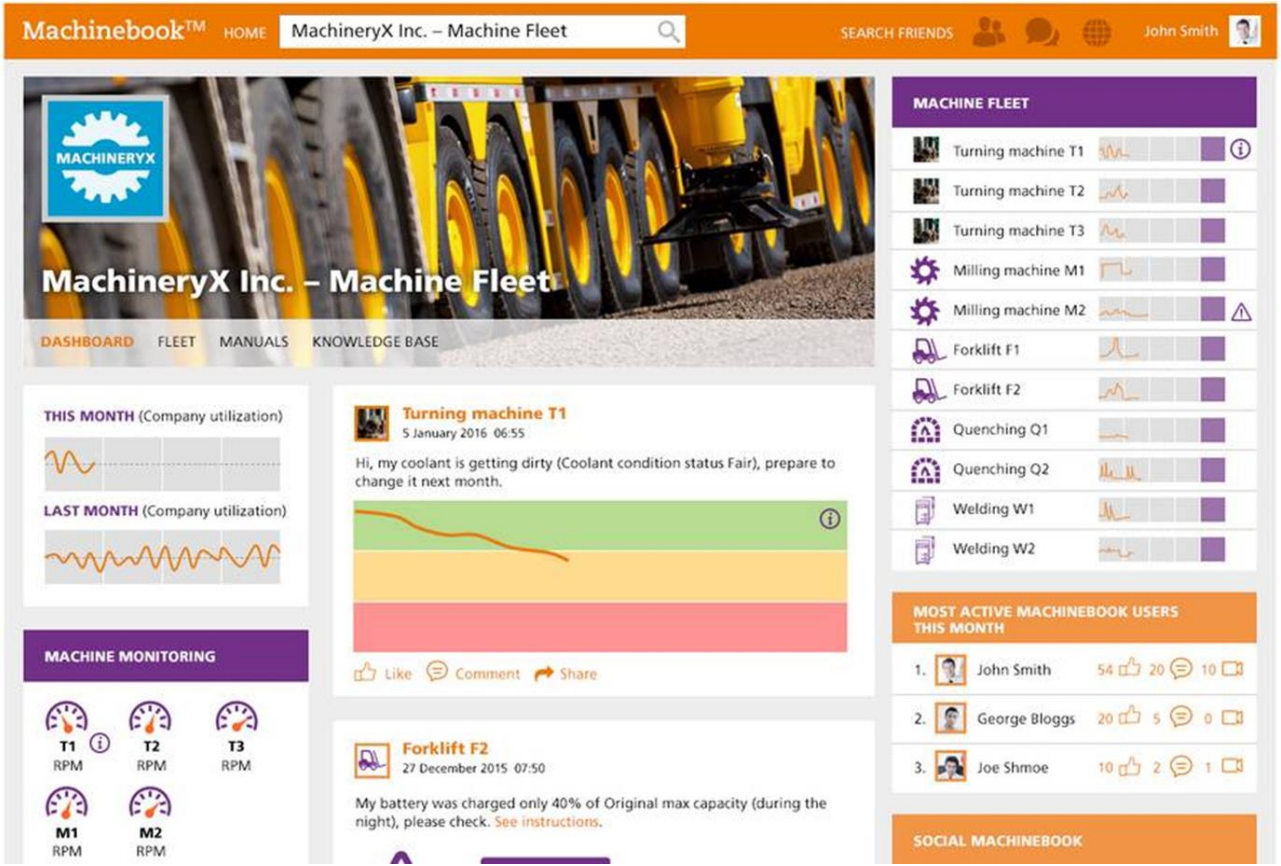
DATA INNOVATION STEMS FROM SHARING, NOT FROM HOARDING



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KONECRANES®
Lifting Businesses™

BIG DATA AND AUTOMATION

OUR EQUIPMENT IS DIGITAL

SWAY CONTROL AND ACTIVE SWAY CONTROL

PROTECTED AREAS AND WORKING LIMITS

SLACK ROPE PREVENTION

ADAPTIVE SPEED RANGE (ASR), EXTENDED SPEED RANGE (ESR)

LOAD FLOATING

MICROSPEED

SNAG PREVENTION

HOISTING SYNCHRONIZATION

INCHING

ASSISTED LOAD TURNING

HOOK LEVELING

TARGET POSITIONING

HOOK CENTERING

SHOCK LOAD PREVENTION

END POSITIONING

FOLLOW ME

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AND DIGITAL PROVIDES CUSTOMER VALUE

- **Grab Control** – Load Sharing, Hoist Synchronization, Automatic Digging Control
  - **Zone Control** – Prevents collisions with Pit Walls, Maze Walls, Hopper
    - **Skew Control** – Prevents Skewing, on Bridge Cranes reduces Flanging
      - **Track Monitoring** – Long-Term Rail Alignment Monitor (Bridge Cranes)
        - **Sway Control** – Reduces Load Sway from crane motions
          - **Remote Operation** – Operate from chair with joysticks/monitors in DCS
            - **Full Automation** – Full Auto, with Operator Station in DCS
              - **Semi-Automation** – Go-To-Hopper, Return-To-Prior-Location
                - **D_2C Inverter Control** – Slack-Rope, Shock-Load, Amp Supervision
                  - **ReGen Control** – Breaking Energy Back to Power Supply Lines
                    - **PLC Supervision**– (2) Status Panels, ReGen Coordination
                      - **Intelligent Anti-Collision** – Safe, Efficient Close-In Working
                        - **Diagnostics** – Archive, Trending, Drive and Device Status
                          - **Remote Support** – ***RemoteExpert***, Monitoring, Support

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OUR CRANES ARE CONNECTED

Customer view

Analytics

Business systems

Gateway

Operator view

3rd party sensors

AC drive

Diagnostic unit

Own sensors

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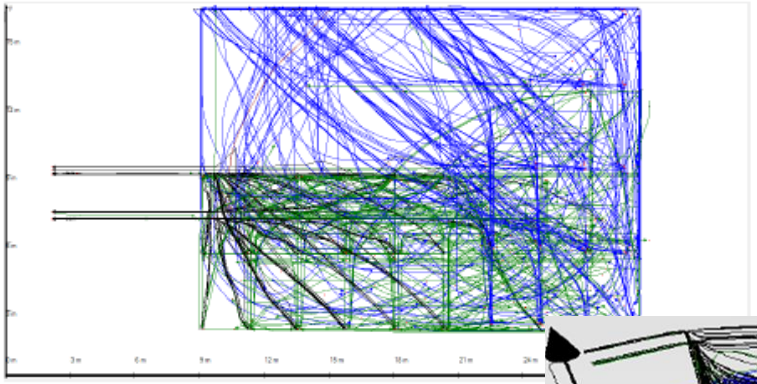
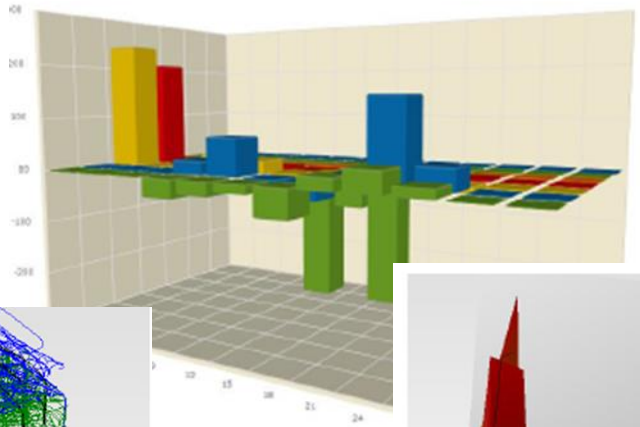
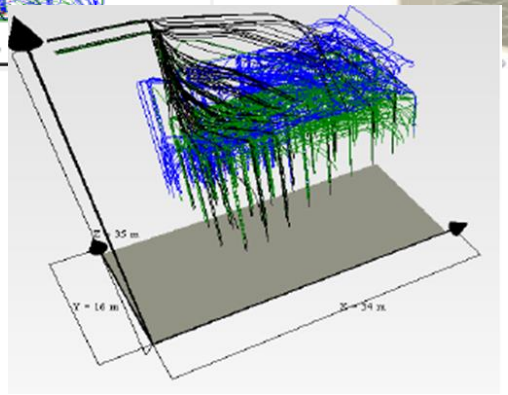
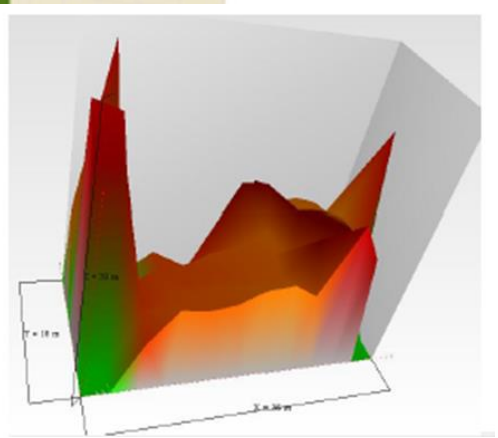
THEY ARE SUITED FOR COMPLEX ENVIRONMENTS…









II-CRANES IN WASTE-TO-ENERGY PLANT HELP THE OPERATOR TO BALANCE THE PIT AND OPTIMIZE THE FURNACE.

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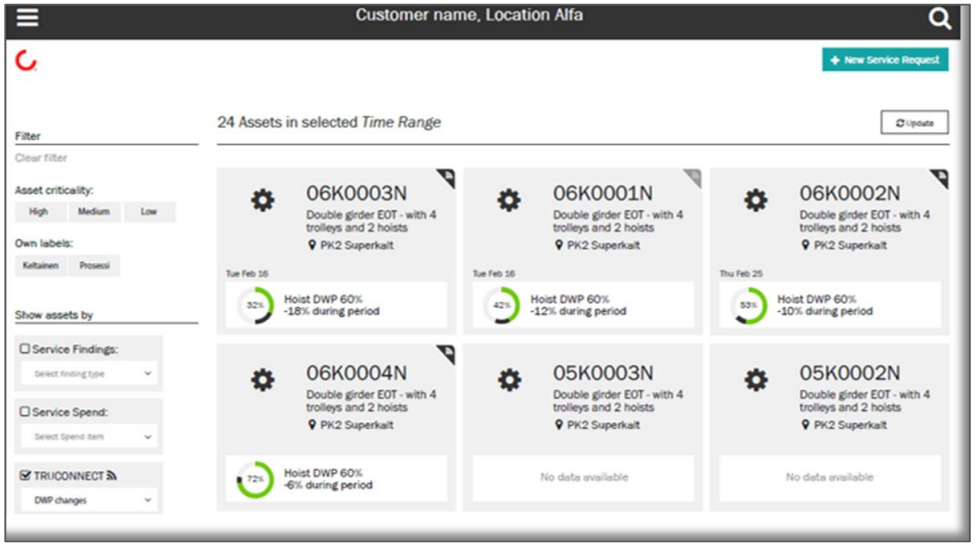
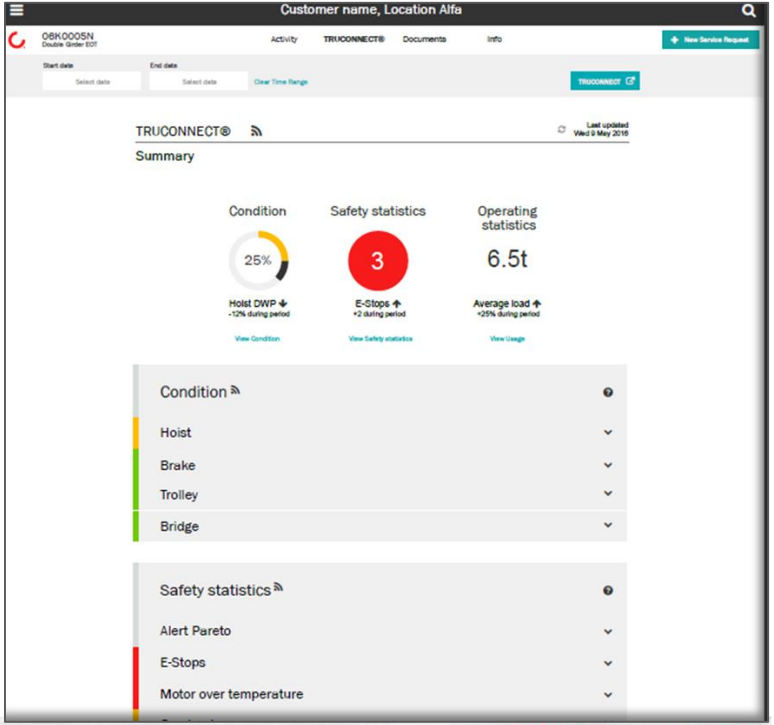
…AND STRAIGHTFORWARD APPLICATIONS





II-CRANES IN STANDARD MANUFACTURING FACILITY HELP TO PREVENT ACCIDENTS, IMPROVE PERFORMANCE AND PREVENT DOWNTIME

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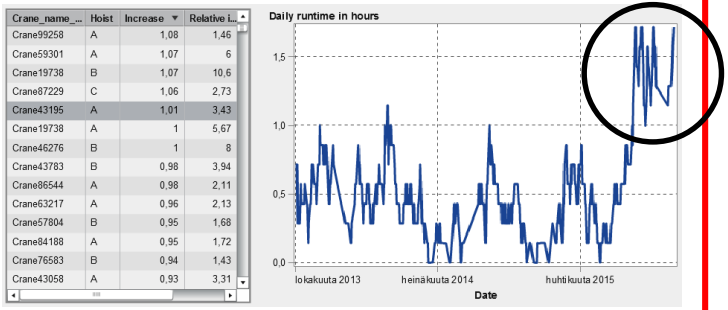
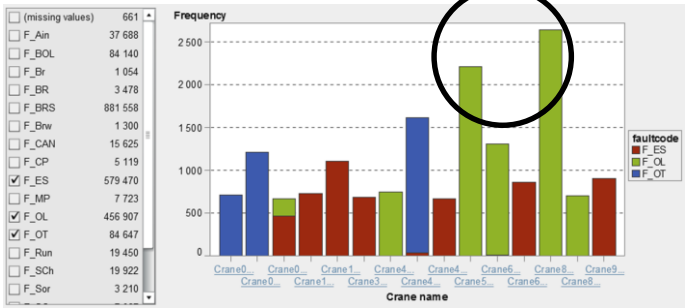
THEY PROVIDE INSIGHTS ON WHEN TO TAKE ACTION

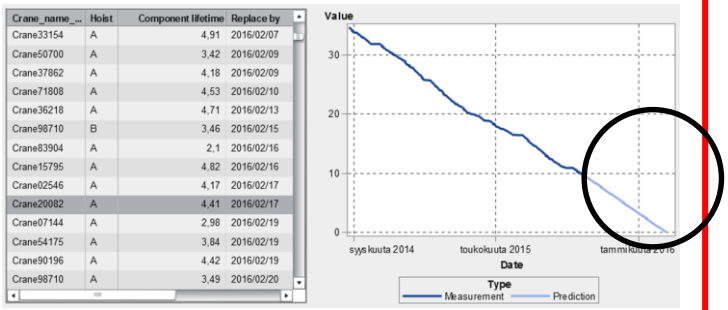
CHANGES IN PATTERNS



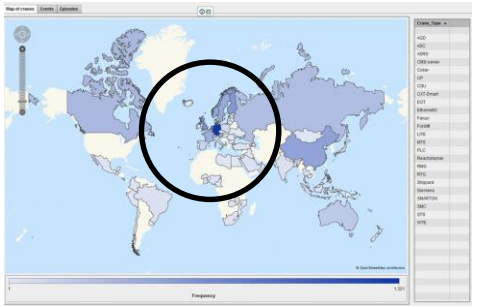
ALERTS AND EPISODES



COMPONENT WEAR



GEOGRAPHIC FLEET VIEWS



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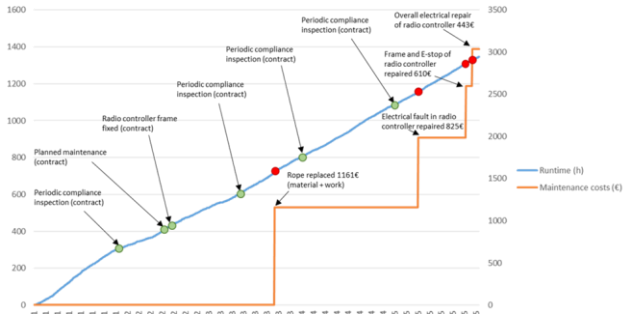
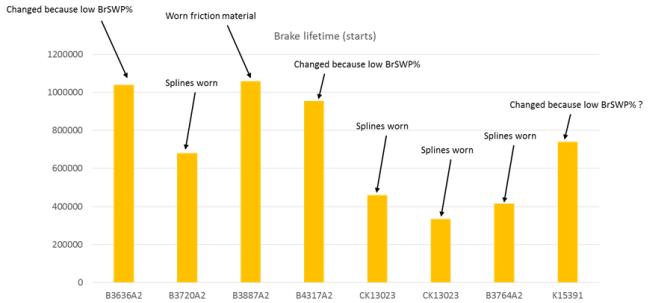
AND HOW TO DESIGN BETTER PRODUCTS & SERVICES

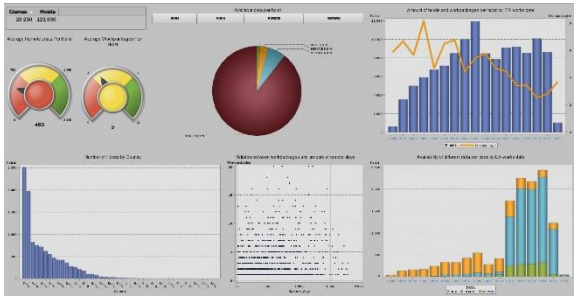
USAGE PROFILES



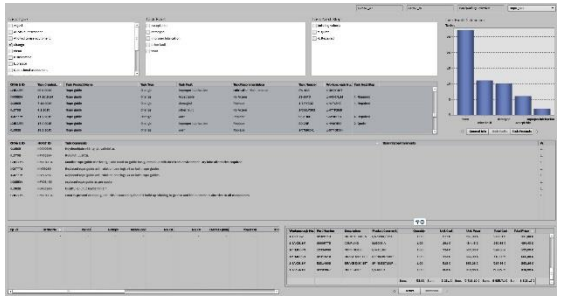
LIFETIME ANALYSIS



POPULATION DASHBOARDS



FAULT PATTERN ANALYTICS



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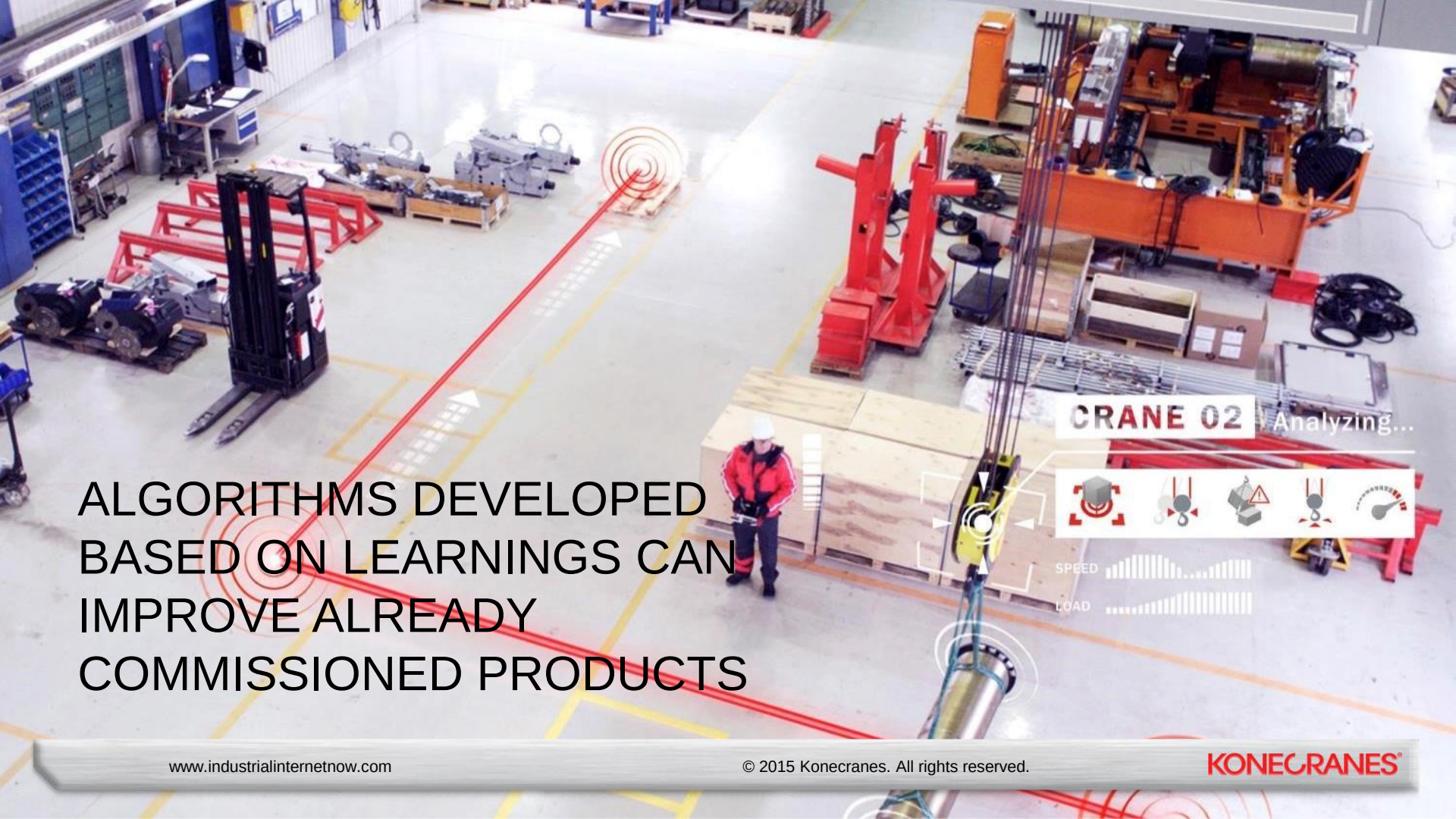

ALGORITHMS DEVELOPED BASED ON LEARNINGS CAN IMPROVE ALREADY COMMISSIONED PRODUCTS

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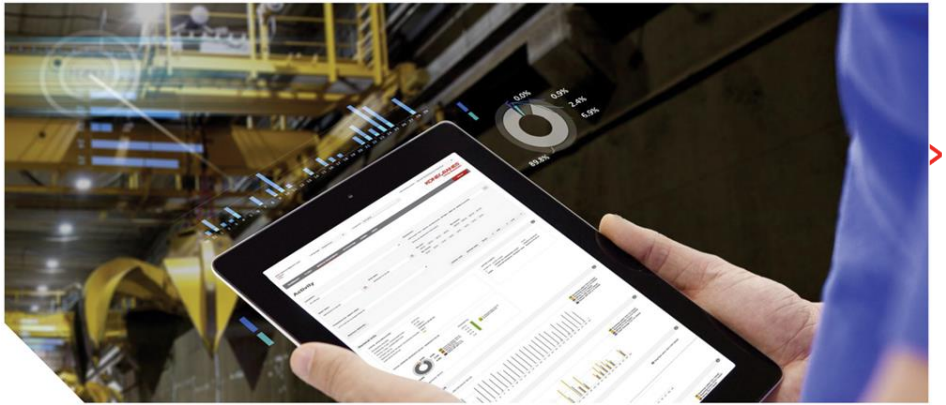
ALSO SERVICES CAN BE DELIVERED DIGITALLY

yourKONECRANES.com

CUSTOMER PORTAL

TRUCONNECT® REMOTE SERVICE



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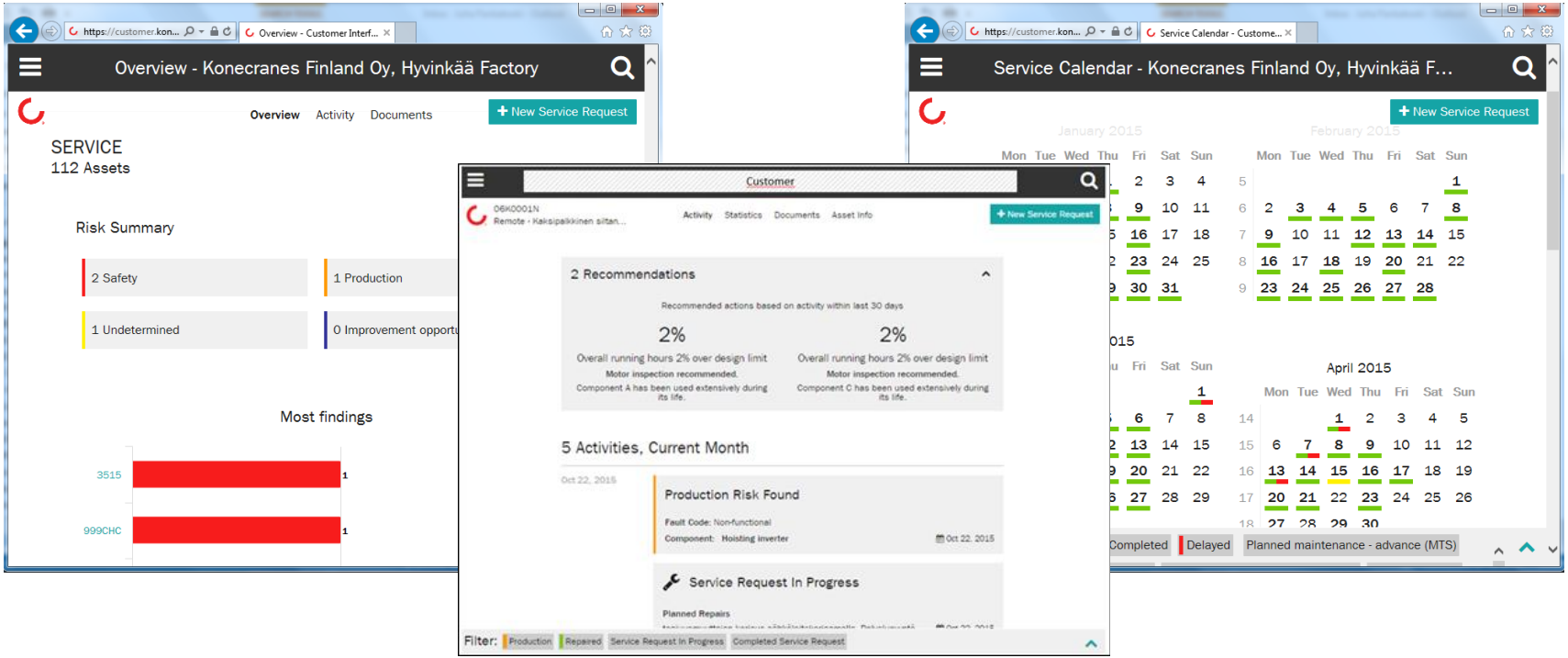
ALL DATA, MACHINE-, MAN-, AND SYSTEM- GENERATED, IS ACCESSIBLE BY CUSTOMERS AND KONECRANES ALIKE



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DATA IS THE NEW OIL.

1. GOOD QUALITY
2. REUSABLE
3. ACTIONABLE
4. MULTI-TIERED
5. ACCESSIBLE

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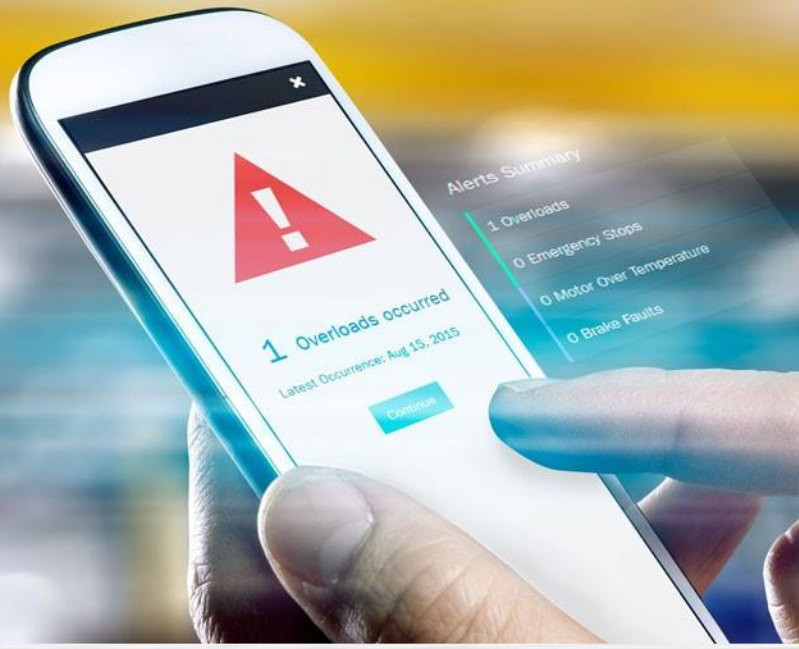
THANK YOU!



NOT JUST LIFTING THINGS, BUT ENTIRE BUSINESSES

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