WORLD CRANE AND TRANSPORT SUMMIT 2019

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Digital Solutions for the Construction Site of the Future

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INTERNATIONAL CRANES AND SPECIALIZED TRANSPORT

AMERICAN CRANES & TRANSPORT ACT

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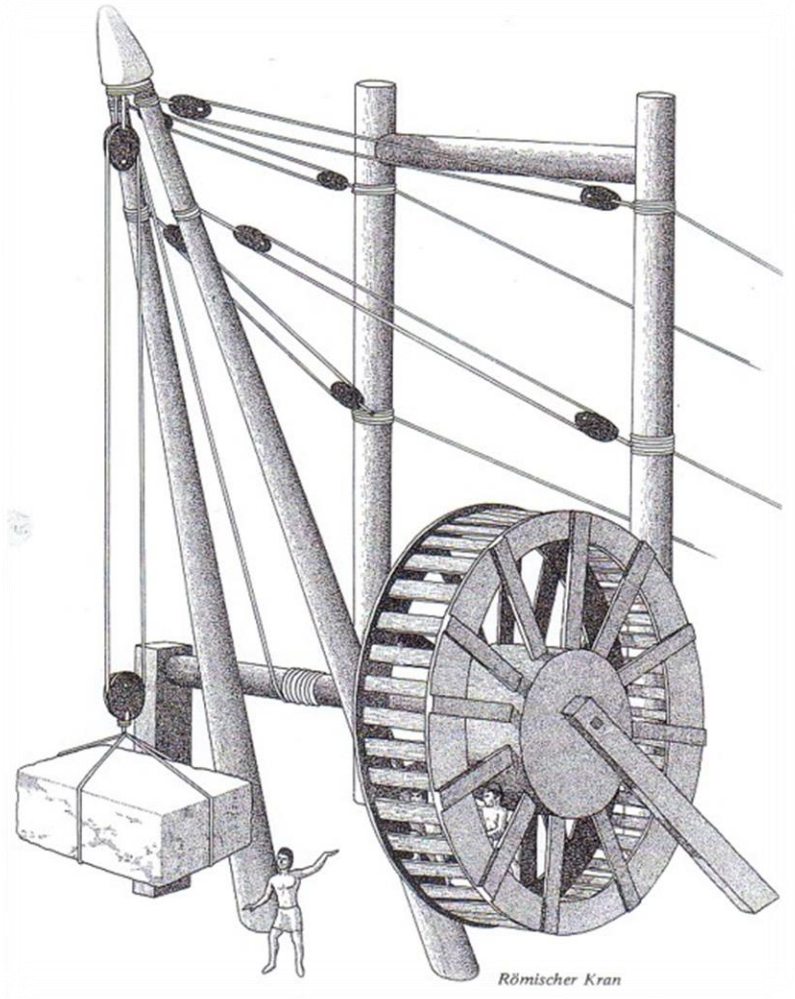
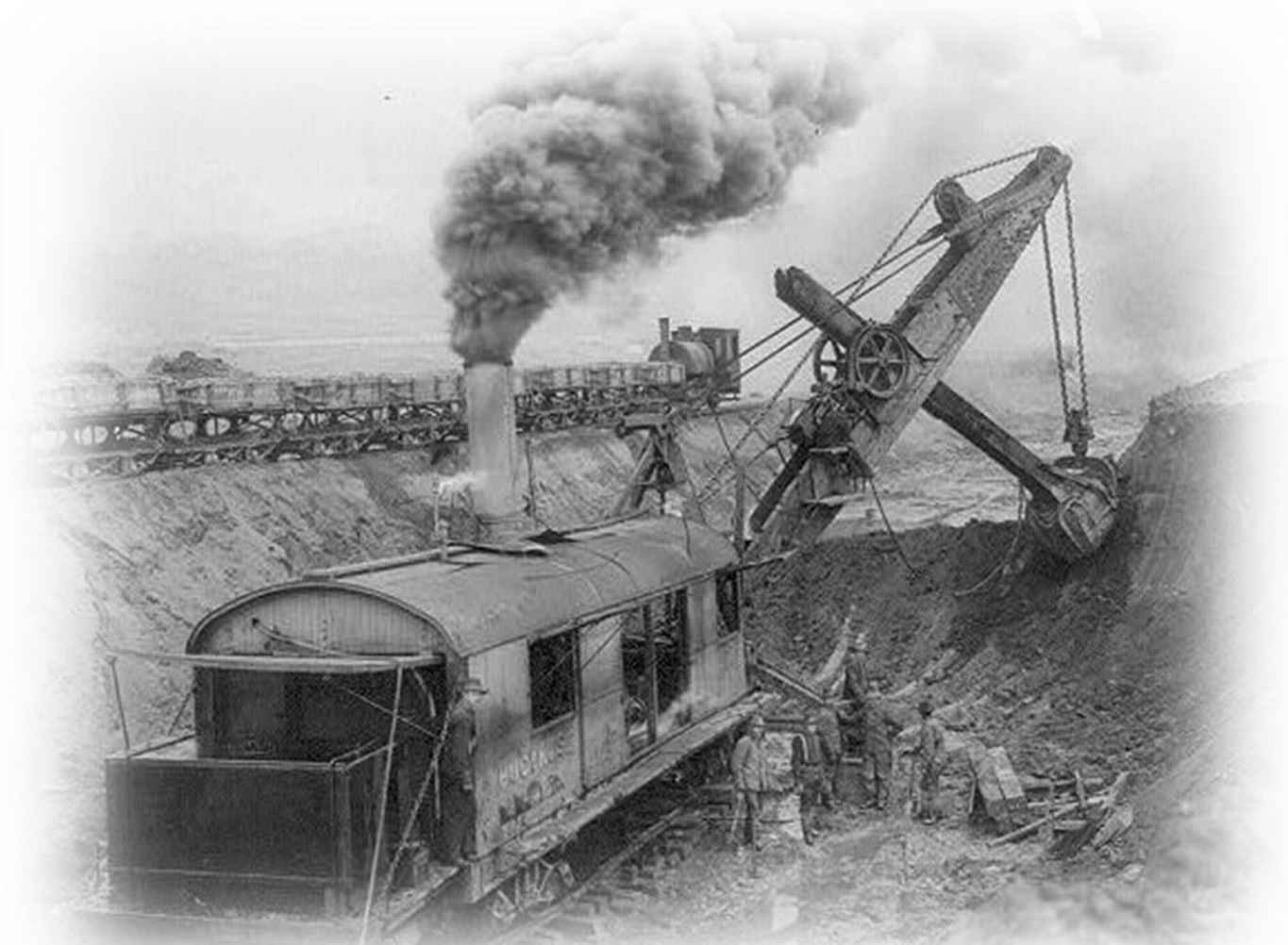
„Humans have an ancient desire to make machines work for us without intervention.“

By Nick Hertzman, Content Strategist, Unearth Technologies



https://www.uibk.ac.at/klassische-archaeologie/Institut/Diplomarbeiten/Lehar.html



https://upload.wikimedia.org/wikipedia/commons/2/23/Western_Pacifc_Railroad_construction.jpg

Aerial Crane „Sikorsky Skycrane“

Source: https://top99nachrichten.blogspot.com/2019/07/get-inspired-for-teuerster-helikopter.html

Skycrane 2.0

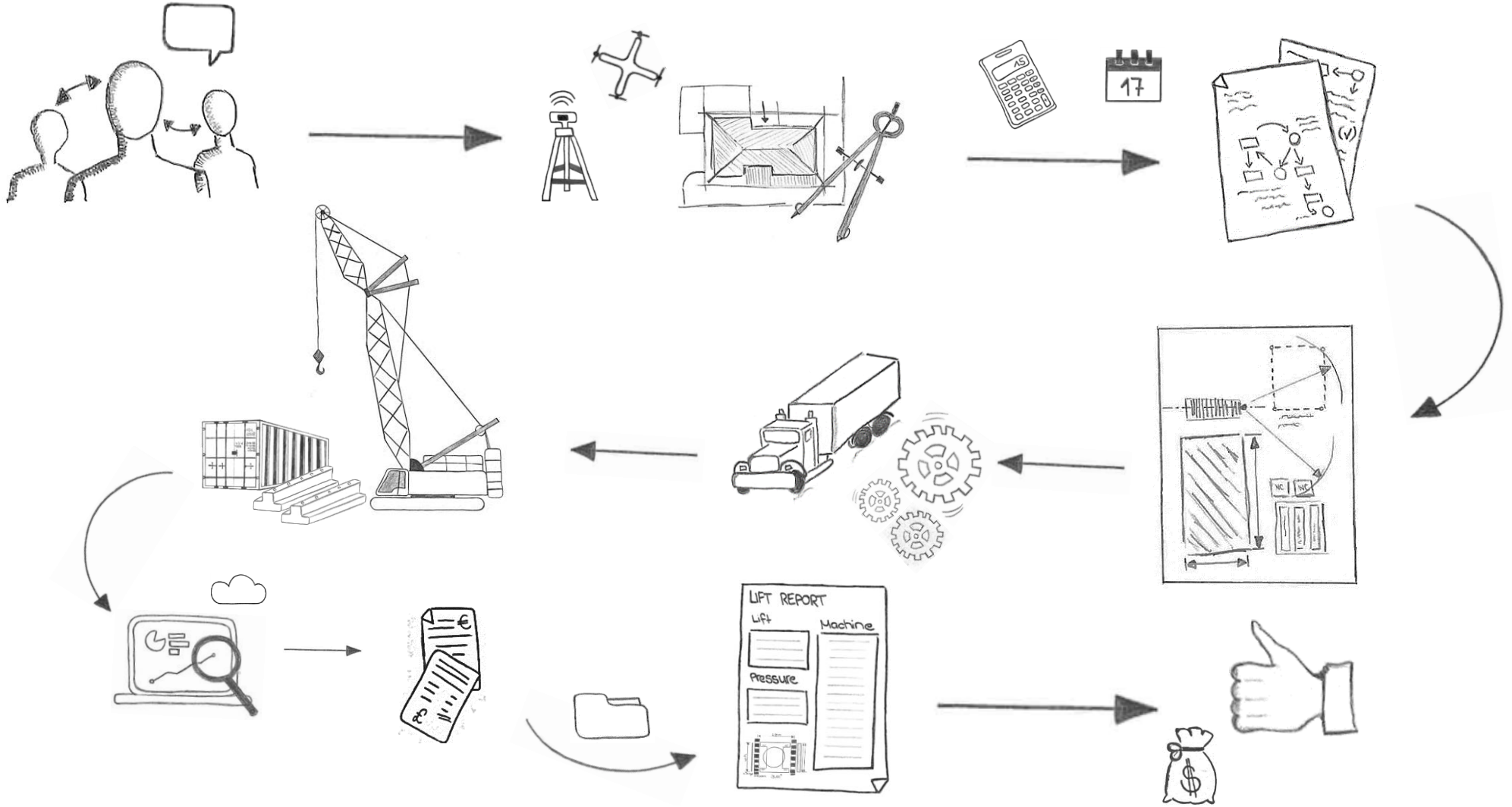
Source: https://www.ndr.de/nachrichten/hamburg/HHLA-prueft-Containertransport-mit-Drohnen,hhla360.html

(Pre) automated jobsite M2X communication

What can Digitization do for us?

- Technology enables to overcome interfaces and reduce complexity
  - Operator has same version as lift planner
- It’s about productivity, efficiency, safety and completing on-time
  - Right machine type, configuration for a lift
- Each Jobsite is specific and basic process is the same
  - Operator performs the safest, most efficient, … lifting procedure

Levels and starting points for productivity increase



Digital, tool based Lift Planning

- Best way to perform the lift
  - Obstacles, wind, load chart, COG, rigging, reporting, CAD files, …

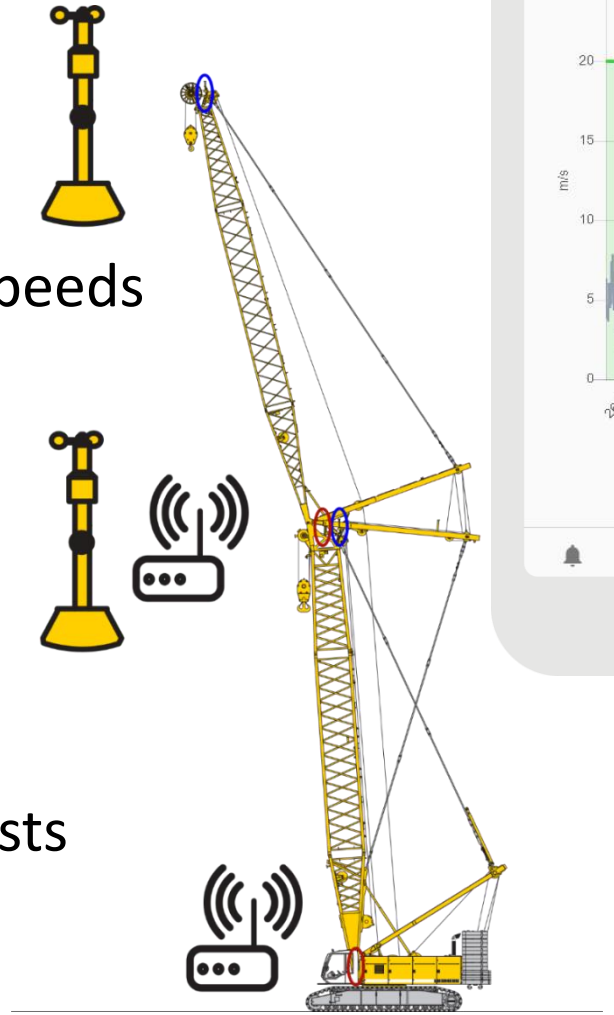
- Versioned, shareable working steps
  - Process chain from idea to the operator

Simulation based skills improvement

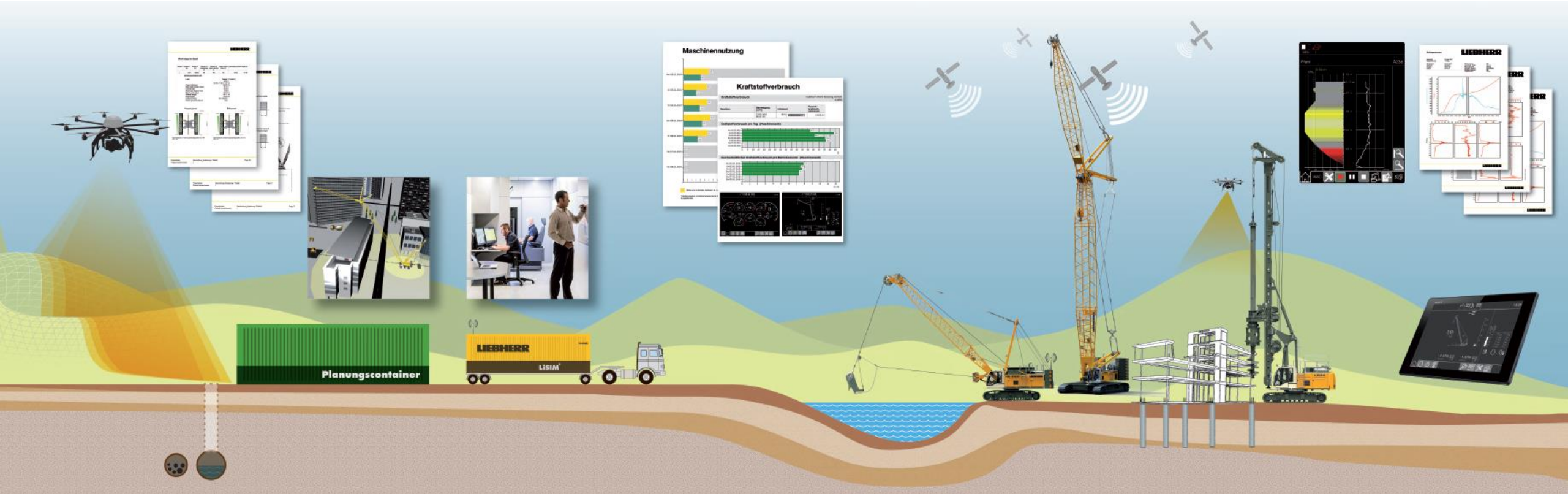
- Preparation of operators for real life challenges
  - Training curriculum
  - Real time physics engine
  - Superior visualisation
  - Sound and motion feedback
  - OEM controls
- Increase safety and performance
  - Wind, travelling inclined, faults, …
- Make use of the installed equipment performance

Wind monitoring and prediction 24/7

- Telematics 2.0
  - Machine, configuration and load specific wind speeds
- Fact based decision
  - Operator <-> Contractor
- Optimise positions and processes
  - Maintenance planning based on weather forecasts



How could a pre automated, digital jobsite look like?



Thank you for you attention!

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