

WOLFFKRAN

Managing a Tower Crane Rental Fleet

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Agenda

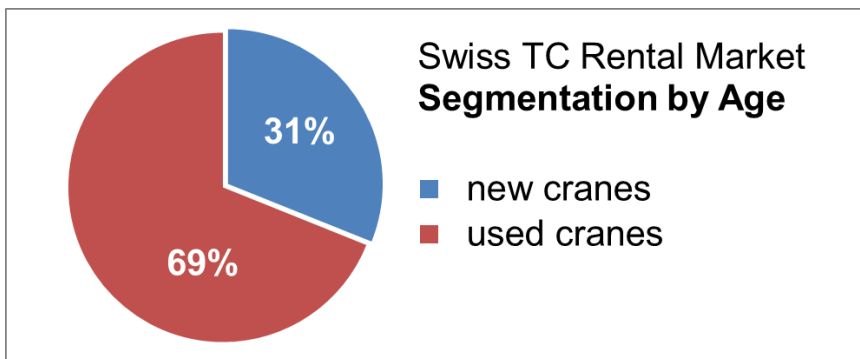
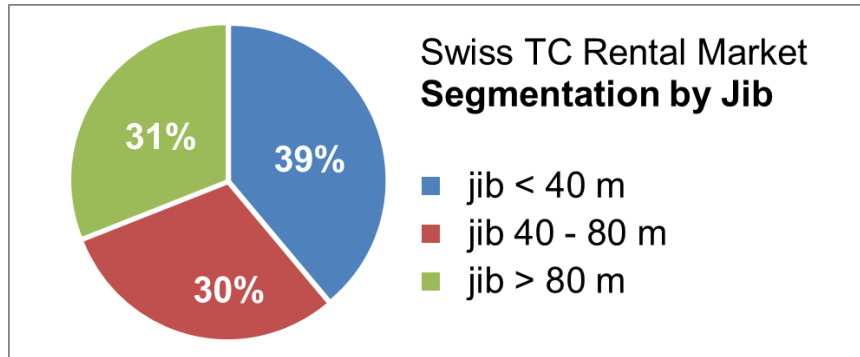
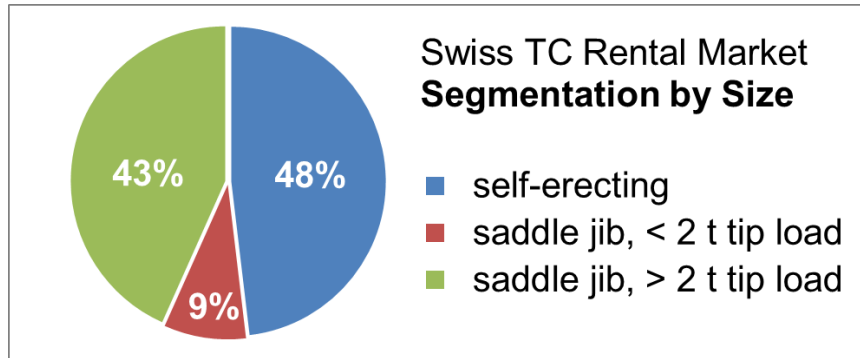
- **WOLFFKRAN Switzerland**
- **Our Key Factors in Managing the Fleet**
- **Preventive Maintenance**
- **New Service Process**

WOLFFKRAN Switzerland at a Glance



- Leading supplier of WOLFF cranes in Switzerland for 80+ years
- Sales and rental of WOLFF cranes
- Rental fleet of 220 cranes
 - 40 self-erecting cranes
 - 180 WOLFF saddle jib cranes
- Complete range of services
 - Technical advice
 - Site planning & crane logistics
 - Rigging
 - Repairs & maintenance
- Two locations in Switzerland
- Approx. 50 staff
 - 30 Service
 - 10 Workshop
 - 10 Admin./Operations
- Wholly owned by WOLFFKRAN

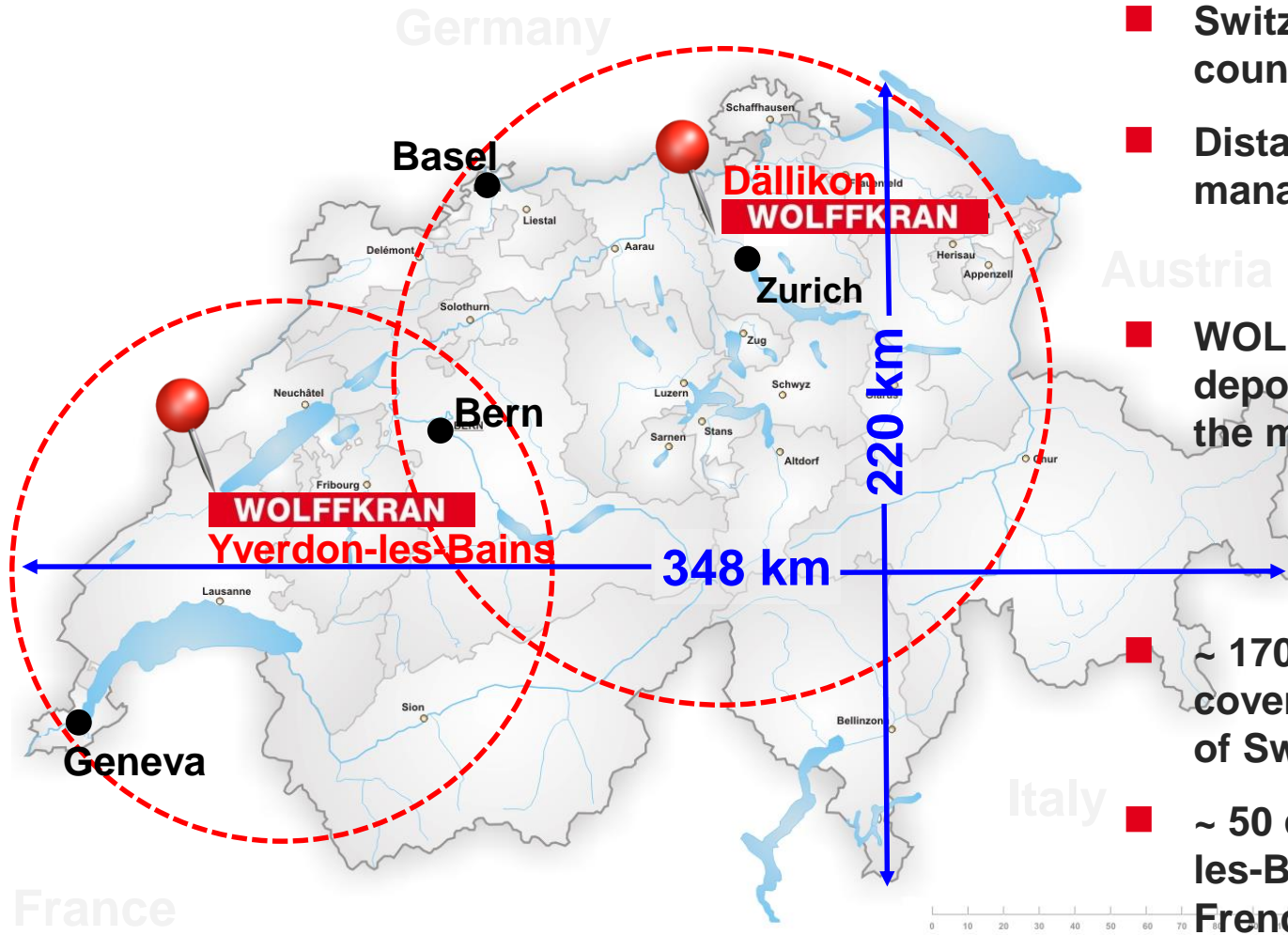
The Swiss Rental Tower Crane Market



- Total market size of 2143 units (2013)
- Every second crane is a small crane
 - Cranes with tip load < 2 t make up for ~ 50% of the market
 - Cranes with jibs < 40 make up largest single segment
- Remaining 50% made up by saddle jib cranes with load moments up to max. 400 mt
- Virtually no luffing jib cranes in the market
- Approx. every third rental crane in the market is a new model

Source:
VSBM Statistik 2013
(Swiss Construction Equipment Association)

The Swiss Rental Tower Crane Market



- Switzerland is a small country
- Distances are manageable
- WOLFFKRAN has two depots covering 90% of the market
- ~ 170 cranes in Dällikon covering the German part of Switzerland
- ~ 50 cranes in Yverdon-les-Bains covering the French part of Switzerland

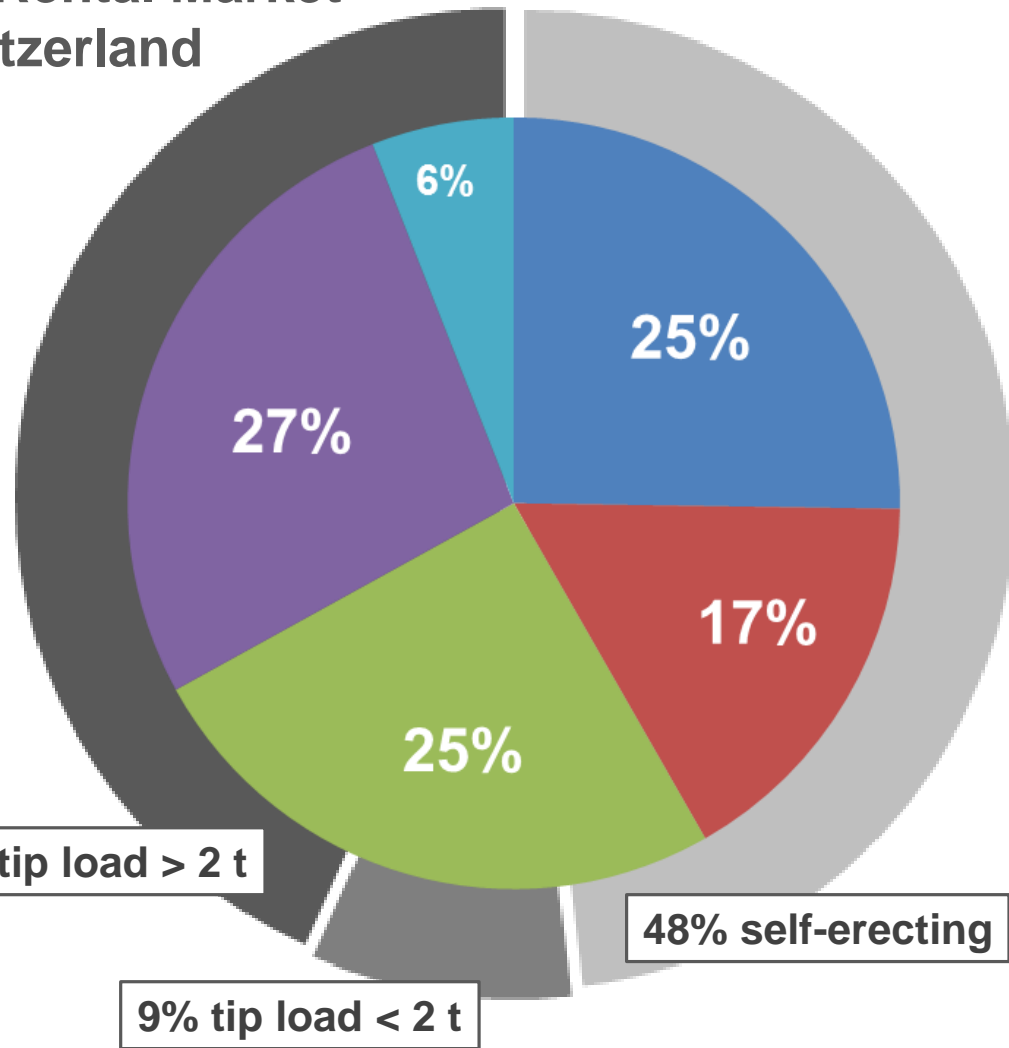
Key Factors in Managing the Fleet



- Crane portfolio reflects market needs
- Technical advice is key sales factor
- Invest in your fleet (repair/upgrade vs replacement)
- Preventive maintenance improves utilization rates
- Service process: decrease administration & increase transparency

Standard Crane Portfolio Reflects Market Needs

TC Rental Market
Switzerland



Switzerland
WOLFFKRAN Fleet
by Size

- ≤ 100 mt
- 101-140 mt
- 141-200 mt
- 201-400 mt
- ≥ 401 mt

Specialty Cranes on Demand



- **WOLFFKRAN Switzerland** benefits from the **WOLFFKRAN Group's** entire rental fleet in case cranes outside of the local portfolio are required

Case Study: Lac d'Emosson Dam

- *Partial demolition and increase of existing dam by 21.5 m to 65 m high*
- *Heavy load capacities required for lifting eroding machinery and removal of demolition material*
- *Difficult to access, high altitude construction site with narrow assembly space and working radius confined by high rock faces*
- *Solution: WOLFF 1250 B luffer with 80 m jib and max. lifting capacity of 40 tons for demolition work*
- *Complemented by a WOLFF 500 B luffer for concreting work (70'000 m³)*

Technical Consultation: Solve Your Customer's Lifting Needs



- Advising customers on the best crane to cover their lifting needs is a key sales factor
- Don't simply give him the crane he is asking for, instead ask him what requirements his projects has
- Often, the customer is better served with a crane he didn't even consider

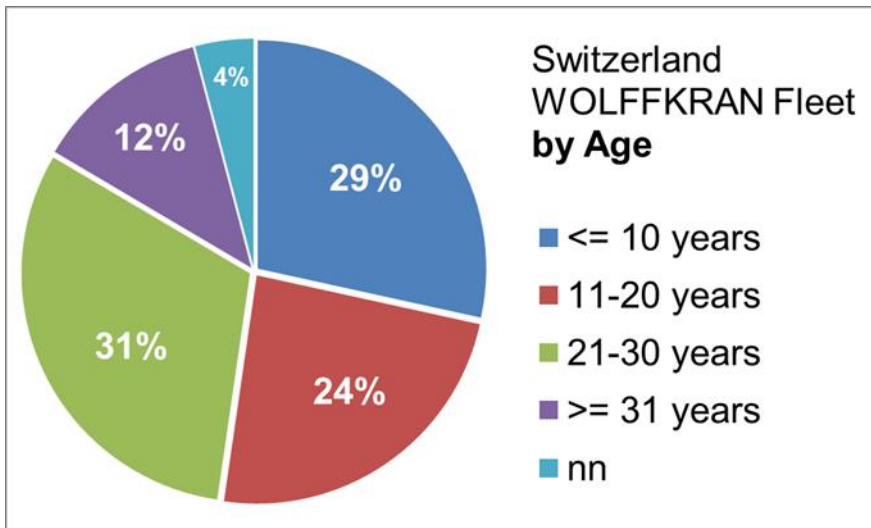


Invest in Your Fleet: Upgrade, Maintain or Replace?

- **General rule of thumb for maintenance and upgrade of a crane:**

Investment must be covered by a rental contract of at least 10 months and predictions that crane can be rented out for the next two year

- **Generally always a best guess based on past experience and projected outlook**



Preventive Maintenance: Key for Safety and Efficiency

① Service Technician

- Systematic visual inspection
- Every crane assembly & take-down
- Mandatory checklist & reporting

② WOLFF Link

- Online crane diagnostics tool
- Stores crane operating data
- Evaluation of maintenance cycles

Scheduling

Coordination of service technicians and/or workshop team

On-Site Maintenance

directly prior/after or during a rental job

- *Change parameters after electronic warnings and failures*

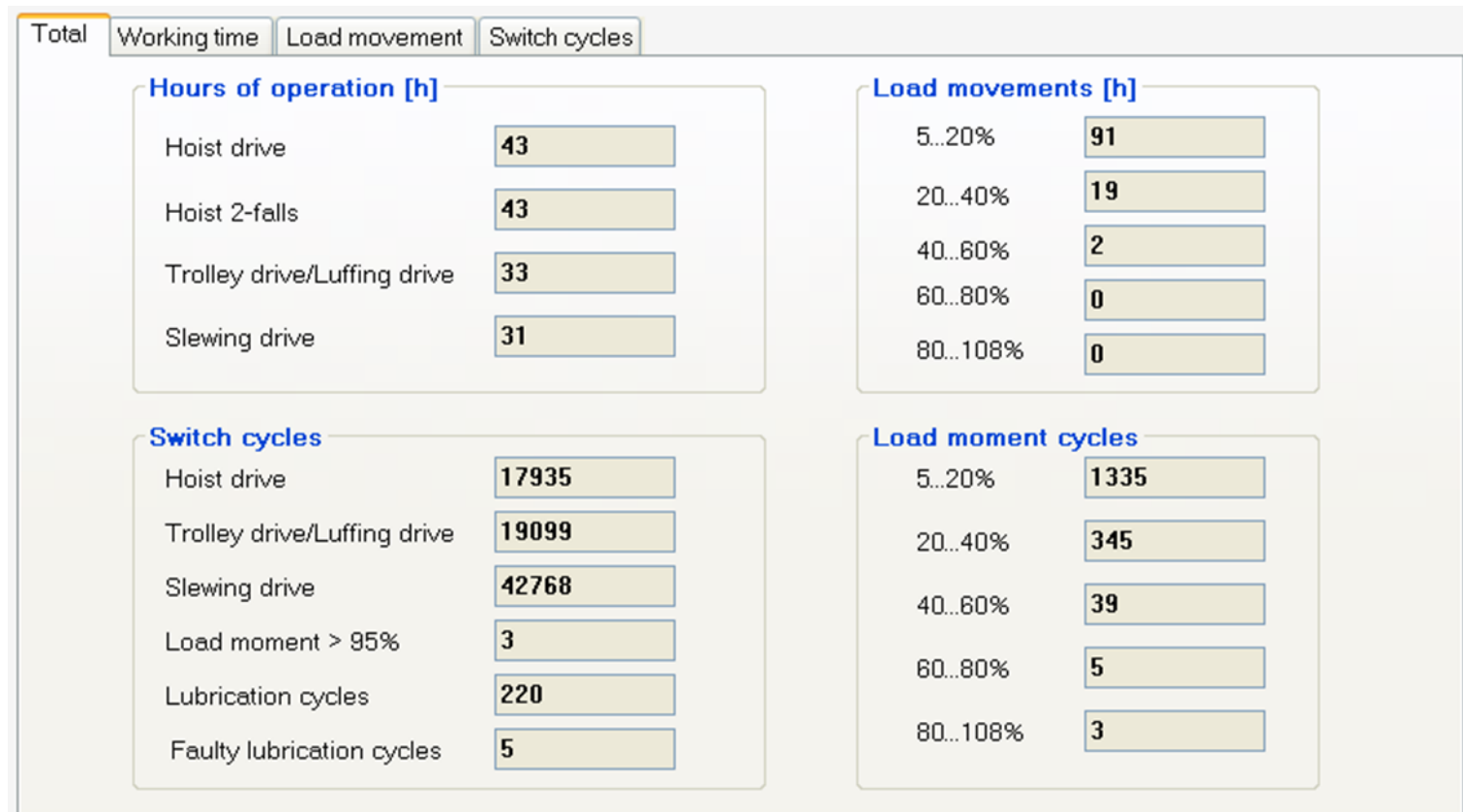
Workshop Maintenance

in between any two rental jobs

- *Change pulley*
- *Check ropes*
- *Check gearboxes for leaks*

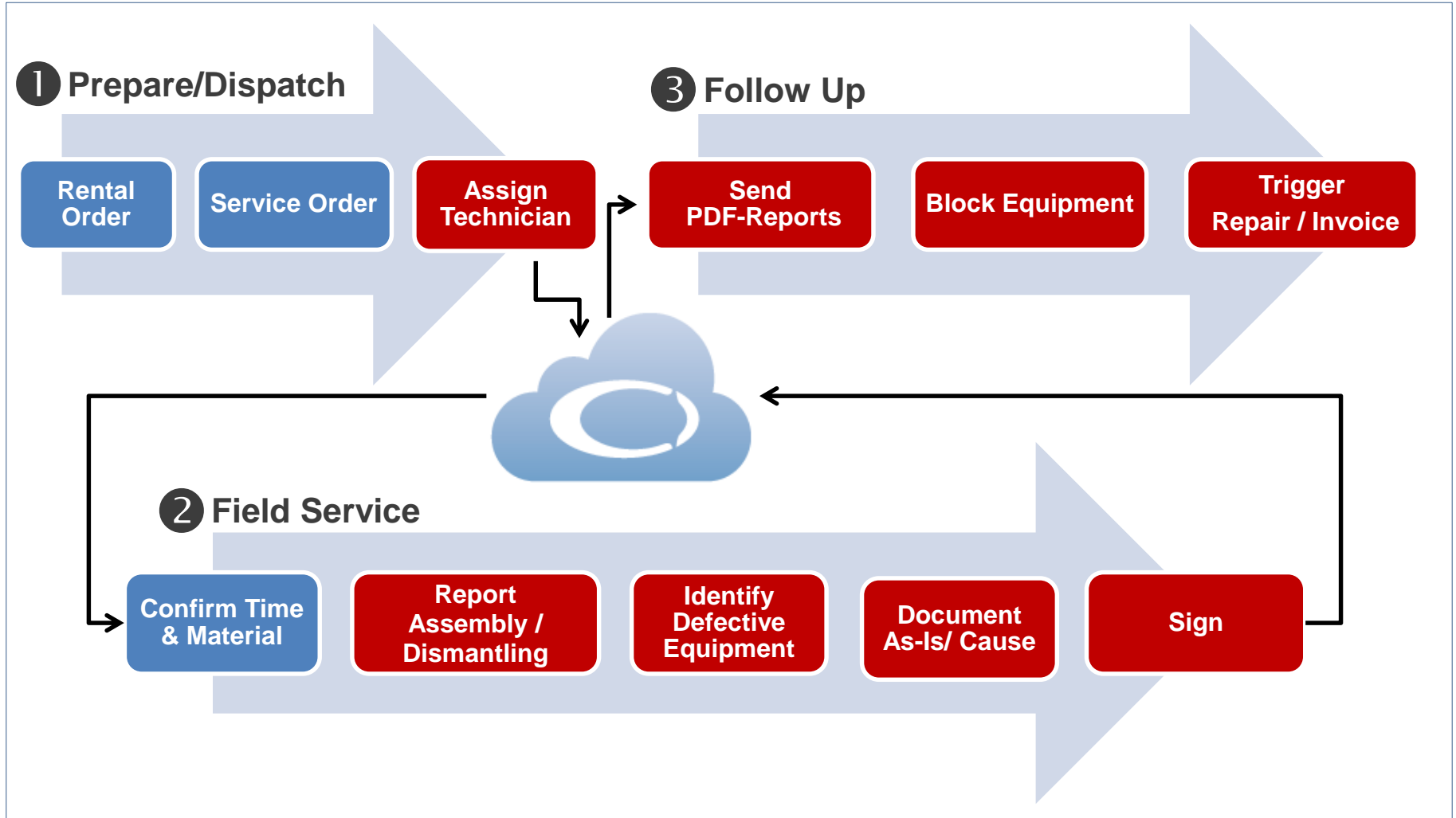
Crane completely maintained & ready for dispatch to next rental job (repeat ① and ②)

Preventive Maintenance: WOLFF *Link* Online Crane Diagnostics



Service Process: Reduce Administration, Increase Transparency

WOLFF Service Module



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