

f **f** **R** flattime
REDUCTION





IADC Spark Tank

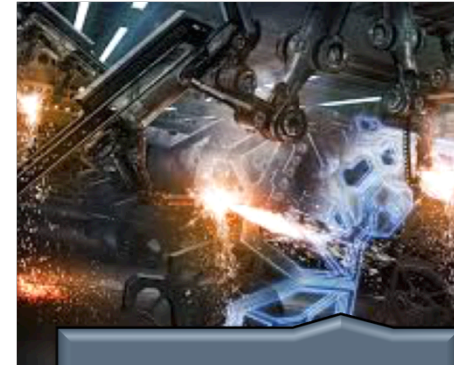
Reducing Drilling Cycle Times with Flat Time Analysis

FTR's Philosophy

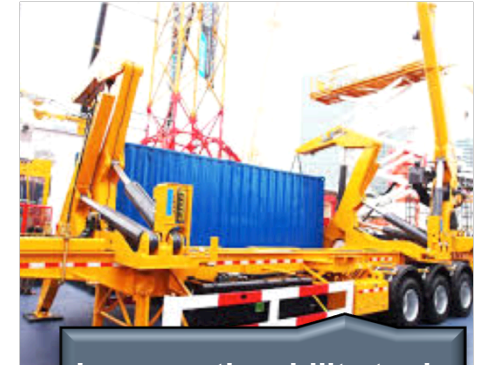
- Every process can be improved
- Success is a function of relationships
- Listen twice as much as you speak



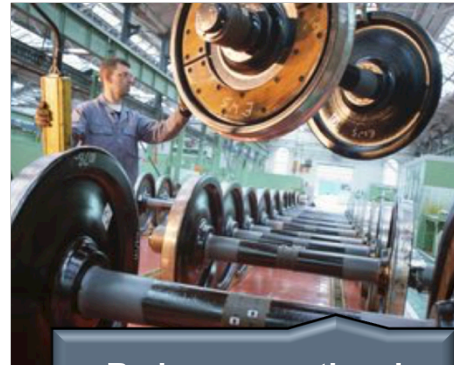
Optimization of complex processes



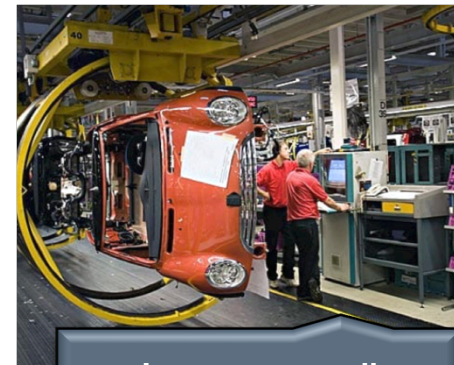
Design better products



Increase the ability to do more with less



Reduce operational costs



Improve overall efficiency



Make work safer, faster, and more rewarding

- Developed “backwards”
- Real oilfield experience
- Focused on simplification

- Complimentary to Big Data
- Custom to rig design
- KPI adaptable



- **Field engineer(s) on site for duration of well**
- **Integrated into rig team**
- **Field data collection**
 - Observations
 - Time study
 - Crew input
- **Field testing**
- **Report findings based on data**



Mobilization

- Pad to pad
- Rig walk/skid



Making connections

- Drilling
- Tripping in/out of hole



Running casing

- Surface
- Intermediate
- Production



Bop handling

- Nipple up/down
- Pressure testing

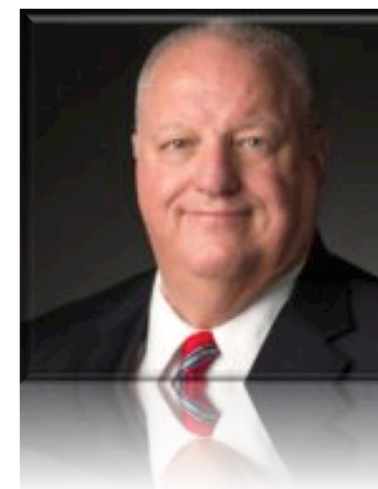
- **Effective rig fleet standardization**
- **Manufacturing approach to pad drilling**
- **Decreased new hire learning curve**
- **Improved reporting accuracy**
- **Faster, cheaper, and safer wells**
- **Increased focus on ergonomics**
- **A smaller office to field gap**
- **Increased sustainability of change**

✓ **Field time for young engineers !!**

“We partnered with FTR for 2 years with a common goal of reducing move times between pads as well as reducing walking time between wells. FTR is not a group of former tool pushers or motivational speakers, they are experienced field engineers. They achieve buy-in from rig managers and crews through LEAN solutions and shared information.. The results were a 49% reduction in move times between locations and a 53% reduction in walking time between wells. I would highly recommend FTR and their engineering approach to streamline rig operations. “

Ed Jacob – President and COO Independence Contract Drilling (ret)

2015 IADC Chairman



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Thank you IADC !!