



IADC/SPE Drilling Conference and Exhibition

★ THE PREMIER DRILLING EVENT ★

4-6 MARCH 2014

FORT WORTH CONVENTION CENTER
FORT WORTH, TEXAS

The Drilling Business Model

Driver or Inhibitor of Performance & Innovation

SPE-167933

DE WARDT
& COMPANY

Global Management Consultant
Oil and Gas

John P de Wardt CEng FIMechE

DE WARDT AND COMPANY INC



International Association of Drilling Contractors

Society of Petroleum Engineers



Welcome to the Elephant in the Room

An obvious truth that is either being ignored or going unaddressed



No direct rewards for technology and performance enhancements

Drilling systems automation needs integrator and rewards

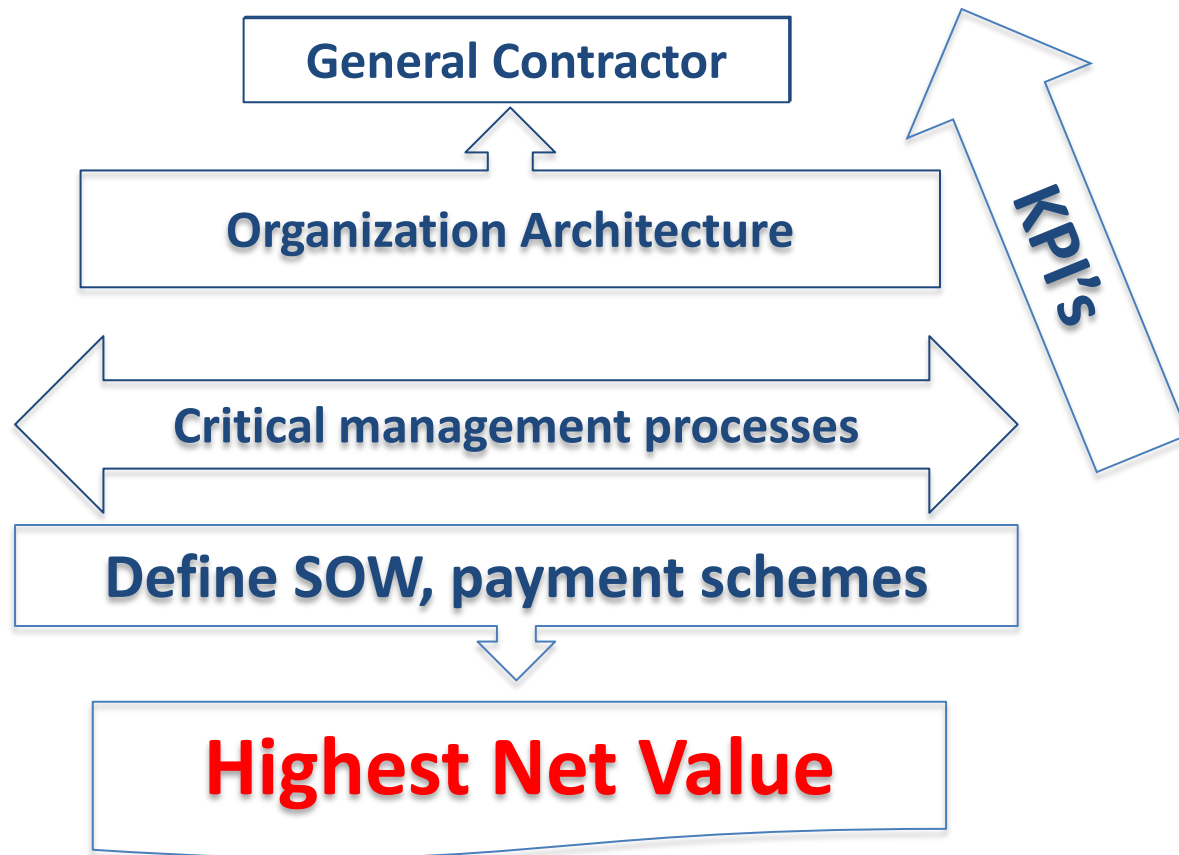
A reverse order presentation

Why wait for the punch line

- **The Blueprint for the successful business model**
- Contracting practices affecting performance
- Organizational Architecture
 - Lean Manufacturing / Systems Thinking
- Tender process
- General Contractor
- Lessor or Operator
- History that brought us here – in the paper
 - Warning 12,000 words! + 33 references



The Blueprint – an overview



The Blueprint - details

1. Design comprehensive organization architecture aligning all participants to objectives of the well(s).
2. Design interdependencies: well construction / subsurface / production.
3. Define General Contractor & interdependence well design & production operations.
4. Define the measures of value delivery, hierarchical system of KPI's.

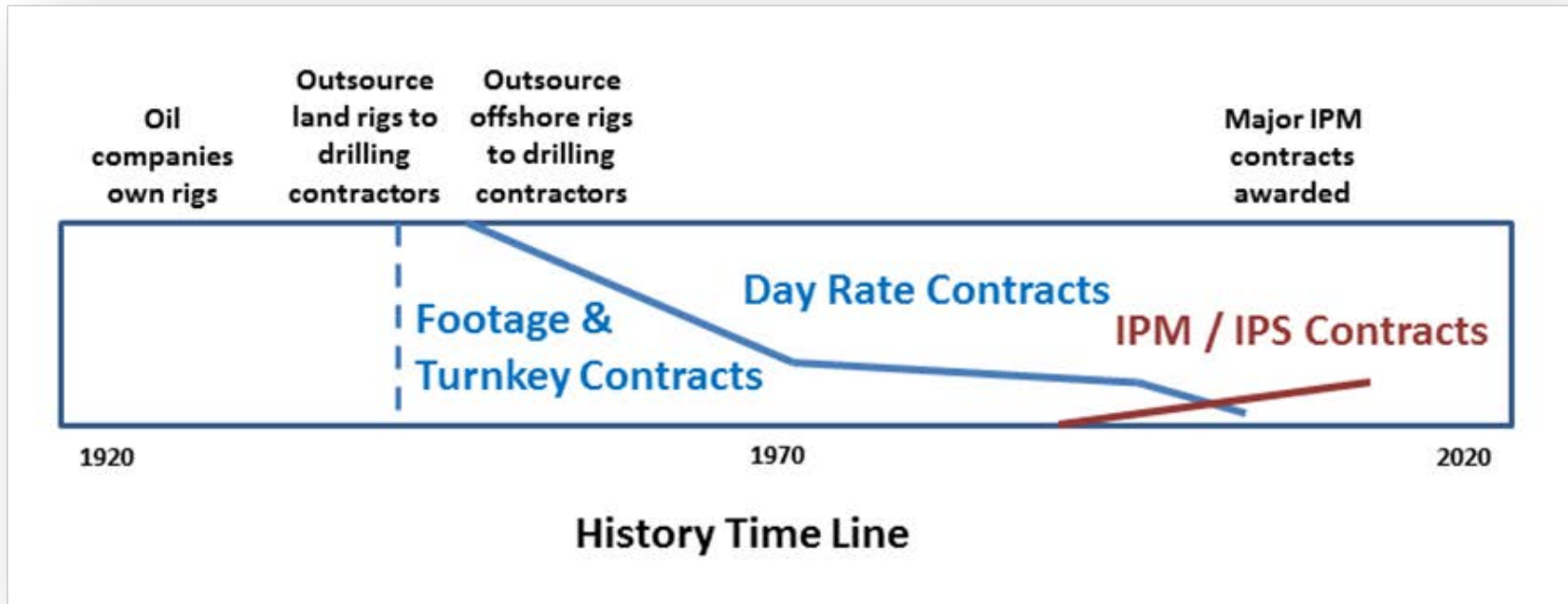
The Blueprint - details

5. Design systems for critical management processes.
6. Define the scope of work, key performance indicators and reward structures in contracts according to organization architecture.
7. Distinguish role lessor of drilling units and performance driller: make contracts recognize these.
8. Award highest net value calculated from a model of the drilling program(s) with high and low outcomes to assess sensitivity. **Do not award on lowest price.**

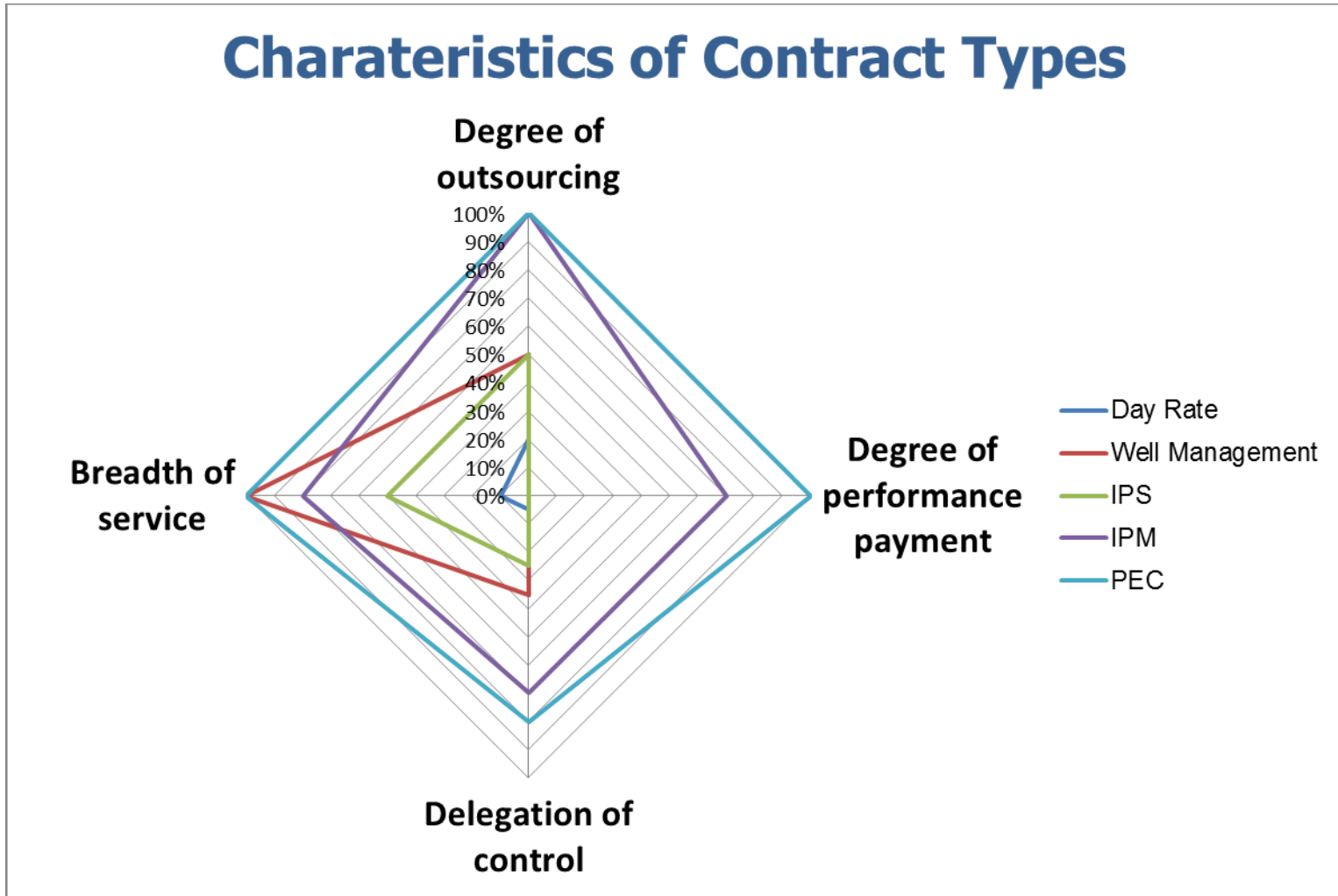
The Blueprint - details

9. Include planning phase of the operation.
10. Treat all personnel as part of the well delivery team and not as individual companies performing a supply service.
11. Develop strong relationship between the onsite execution team and the office based planning / support team.

Drivers Affecting Change

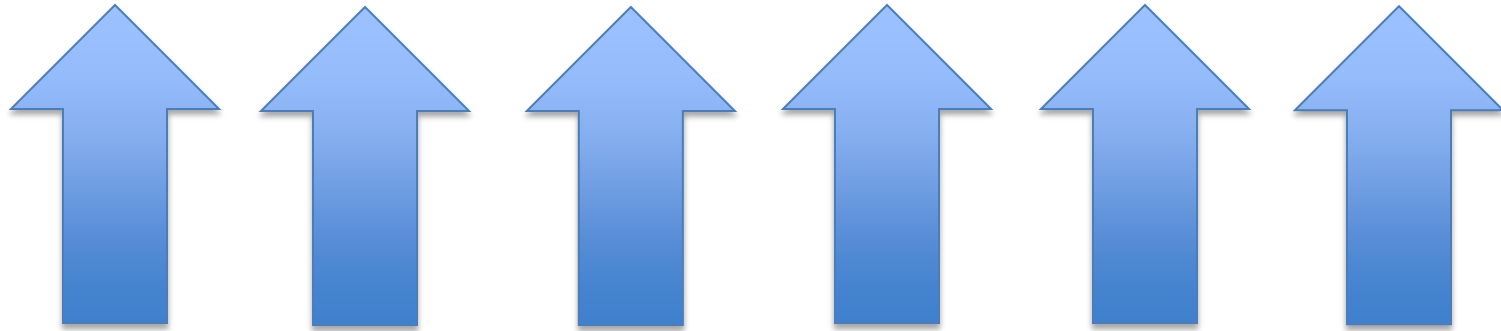


Contracting practices = performance



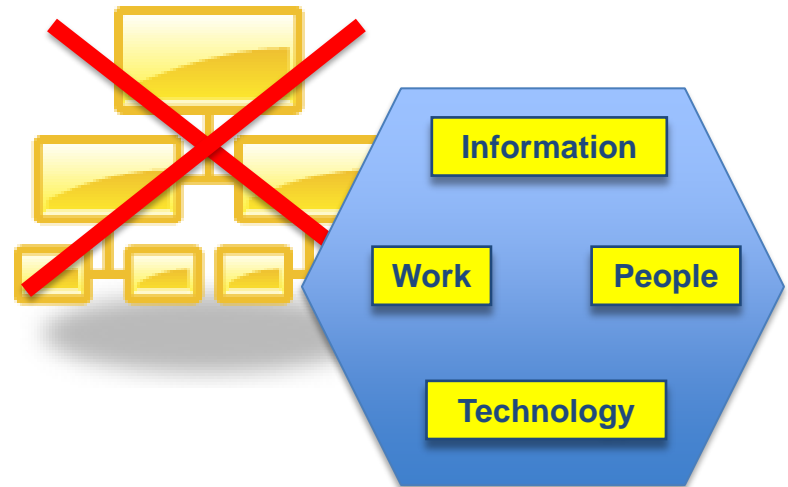
Organizational Architecture

Lean Manufacturing / Systems Thinking



Deliverables:

- Reduction subsurface uncertainty
- Data acquisition
- Well placement
- Well bore integrity
- Well inflow
-
-



Tender Process

Saving costs or Killing value

Independents

- Operations department is the buyer
- Operations department focusses on well cost / value
- SOW related to the project

Large Operators

- SCM department controls the tender process
- SCM department focusses low cost / commoditization
- SOW not structured to the WC project

Projects based on low bids failed - Merrow

Who is the General Contractor

- IPM / PEC - very clear
- Day rate contracts - unclear
 - Partially assigned responsibilities – muddled waters
 - Assertion of role varies by operator
 - Lacks distinction between engineering, construction and commissioning
- Drilling Systems Automation requires an integrator
 - Fragmented / huge interoperability issues
- The wholly owned subsidiary GC
 - A successful analogy

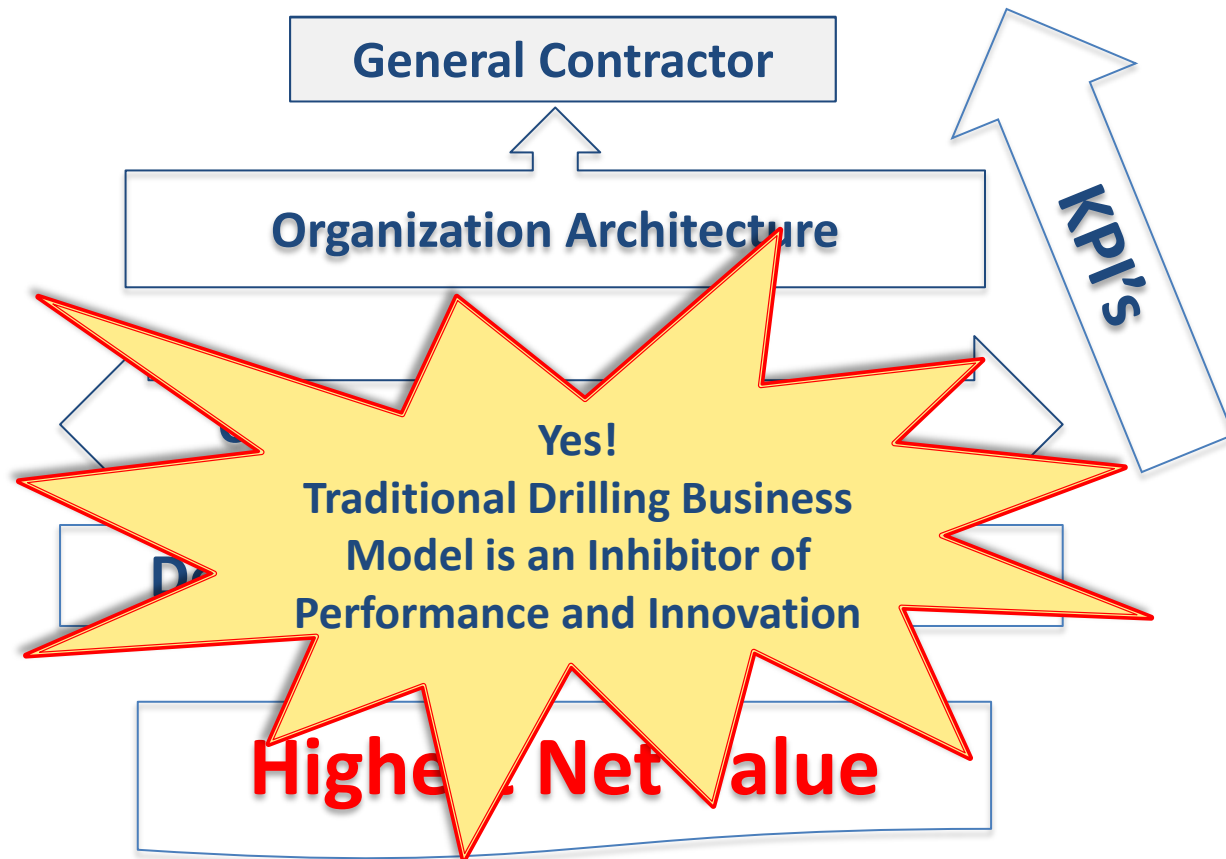
Lessor or Driller

- Standardization of drill ships led to firm costs / firm yard delivery schedule
 - Encouraged new players with new investors
- Financial markets value earnings (EBITDA)
 - Day rate minus costs
 - High utilization – more days on contract
- Reputation for safety / reliability

**Lessor more than Driller
Need a General Contractor**



The Blueprint – an overview





IADC/SPE Drilling Conference and Exhibition

★ THE PREMIER DRILLING EVENT ★

4-6 MARCH 2014

FORT WORTH CONVENTION CENTER
FORT WORTH, TEXAS

The Drilling Business Model

Driver or Inhibitor of Performance & Innovation

SPE-167933

DE WARDT
& COMPANY

Global Management Consultant
Oil and Gas

John P de Wardt CEng FIMechE

DE WARDT AND COMPANY INC



International Association of Drilling Contractors

Society of Petroleum Engineers

