Primary funding is provided by

The SPE Foundation through member donations and a contribution from Offshore Europe

The Society is grateful to those companies that allow their professionals to serve as lecturers

Additional support provided by AIME
Practical and Value-driven Management of Non-Technical Risks

Vietnam Section, Ho Chi Minh City, June 20, 2019

Christiaan Luca, MSc PE
Community Wisdom Partners, Associate Partner
PetroSkills Oil and Gas Training, Course Director and Instructor
Presentation outline

1. What are Non-Technical Risks?
2. Why are NTRs so relevant?
3. Why are they difficult to manage?
4. How can we organise ourselves better?
5. Case studies

A solid external response requires a solid internal organisation
1. What are Non-Technical Risks?
Non-Technical Risks are related to External Stakeholders

Non-Technical Risks:

- Are related to **external stakeholders**:
  - Who influence the ability of your organisation to achieve its aspirations and goals
  - The organisation has no control over external stakeholders.

- Can be negative but also positive

- Are different from technical and commercial risks

- Play at all organisational levels: project, asset, country, corporate
Some examples of Non-Technical Risks

- The bank may not approve project funding if it does not meet IMF standards
- The local community blocks the construction road due to lack of jobs
- Your fresh water needs may create conflict with the farmers
- The government may not approve your local content plan
- The regulator is not familiar with your new technology
- An NGO opposes your environmental impacts
- Your equity partner may not comply with your business principles
2. Why are NTR’s so relevant?
Non-Technical Risks can dramatically impact the bottom line

**Goldman Sachs** review top 190 oil and gas projects, globally - 2008

**IPA detailed review (2011):**
- 2/3 megaprojects fail,
- 78% failure rate for O&G

**ING Bank** valuing NTR performance (2017):

$1bln loan, NTR performance dependent

NTRs impact the bottomline in various ways

- Schedule
- Cost
- Volume
- Price
- Gov Take
- Project Value
- Corporate / Industry Level Manifestation
- Reputation
- Business Opportunities
- Retail Interest
- Portfolio Value
Just good community relationship, or more?

Unconventional gas development. Courtesy Shell
3. Why are NTR’s so difficult to manage?
‘Trust Me´ - a limited number of relationships

HSE, Legal and External Relations deal with the rest of society
´Tell me´ - stakeholders want to be informed
´Show me´ - taking the external complexity inside
´Involve Me´ - new partners in the business!

‘INVOLVE ME’
´Join us´ - business is serving society
4. How can we organise ourselves better?
Address the people and their processes

1. Set accountabilities and responsibilities
2. Use the Enterprise Risk Management framework
3. Make it tangible: quantify NTRs
4. Follow the capital project delivery process
5. Align the externally facing functions, appoint a NTR Coordinator
6. Create regular dialogue between technical, commercial and non-technical
7. Educate and involve the senior decision makers
Facilitate decision-focused dialogues

- Appoint an NTR Integrator
- Bring non-technical departments together
- Integrate with Technical & Commercial: NTR Integrator joins the Project Mgt Team
- Link with country team
Example: analyse key NTRs using the Bow-Tie
Bow-Tie example: step 1 - risk path analysis

Well Site Blockade by Community

Lack of Jobs at Site
- Lack of skills
- Single access road
- # jobs

Construction Traffic
- Use of violence

Lack of Trust In Company
- Perceived non-delivery on promises
- Entry into plant
- Time to negotiate

Revenue Loss

Damage to Plant

Injuries
Bow-Tie example: step 2 - preventive barriers

Well Site Blockade by Community

- Lack of Jobs at Site
- Construction Traffic
- Lack of Trust In Company

- Single access road
- Rehabilitate road
- Perceived non-delivery on promises

- Training program
- Lack of skills
- Micro-financing
- # jobs

- By-pass
- Refurbish school before drilling starts
- Agreed Social Investment Plan

- Time to negotiate
- Entry into plant
- Revenue Loss
- Damage to Plant
- Injuries

- Use of violence
Bow-Tie example: step 3 - containment barriers

- Lack of Jobs at Site
- Construction Traffic
- Lack of Trust In Company

Well Site Blockade by Community

- Revenue Loss
- Damage to Plant
- Injuries

- Community Committee
- Time to negotiate
- Crisis Plan
- Entry into plant
- Security
- Access barriers
- Training of guards
- Use of violence
- # jobs
- Single access road
- Lack of skills
- Perceived non-delivery on promises
- Construction Traffic
- Lack of Trust In Company
- Revenue Loss
Example: **steer action by using the Italian Flag**

- Define the risk event
- Collate evidence
  - Green supports risk not materialising
  - Red supports it will materialise
  - White: inconclusive
- Agree on likelihood statement
- Convert to probability
- Agree Actions and assign Action Parties!
Example: steer action by using the Italian Flag

Risk: Not obtaining permits
Case: DeWijk-20

Conclusion:

| Excluded | 0%  
| Extremoly unlikely | 5%  
| Very unlikely | 15%  
| Unlikely | 33%  
| Equivocal | 50%  
| Likely | 66%  

| Very likely | 85%  
| Extremely likely | 95%  
| Certain | 100%  

Positive evidence
- Gasseltenijerveen
- WKI Schoonebeek
- Communication journey positive
- Municipality willing to cooperate
- Cooperative landowners
- Provincial Authorities willing to cooperate
- 1st response communities not negative
- Vendor: “I will meet the noise standards”
- NAM has long standing, solid reputation in area

Inconclusive evidence
- Municipality supporting location de Wijk 15
- Number of neighbour voiced concerns
- Technical specifications for noise
- Formal concerns expressed on ESHIA

Negative evidence
- Tibben
- Hoogezand
- Ranum
- Environmental advisor municipality critical
5. Case studies
The Wadden Sea case

- Largest nature reserve in Europe
- A single major wetland system of 10,000 km² islands, tidal flats and channels
- Along North Sea coasts of the Netherlands, Germany and Denmark
- Over 10 mln visiting migrating birds per year
- Important spawning ground for fish
- UNESCO World Heritage Site since 2009
The Wadden Sea case
The Wadden Sea case: how to get yourself into a drilling moratorium

"Hands off the Wadden gas"

"(Island of) Terschelling gas free"

"No gas from (the island of) Ameland"
The Wadden Sea case: ….. and how to get out again

Average score per intervention

- Cockle fishing
- Mussel fishing
- Climate change
- Shipping disasters
- Exotic species
- Harbour extension
- Discharge of micropollutants
- Shrimp fishing
- Dredging for bait (lugworms)
- Recreation
- Extraction of natural gas
- Military exercises
- Windmills
- Visual amenity

Change in nutrient load

- Average score
- Standard deviation
Case study

Competition for fresh water

Main issue:
- Competition for water in arid situation
- Established water users protest new users

Opportunity:
- Oil industry water demand is relatively small
- Water value to oil industry is relatively high
- Significant scope for water use optimisation

Data: Eagle Ford Shale Play, Texas - Study by Texas Resources Water Institute (2014)
Case study

Dawson Creek Reclaimed Water Project

Main issue:
- Groundbirch using scarce potable water resources for fracking operations
- Trucking water 48-km to ops (2 mln miles per year)

Opportunity:
- Re-use municipal wastewater dumped
- Partner with City of Dawson Creek
- Co-financed construction of wastewater treatment plant to deliver grey water to local industry
- Laid pipeline to replace trucking traffic
- Opened in September 2012
Case study

Rigs-to-Reefs Gulf of Mexico

Opportunity:
- Important hard strata are preserved for the ecosystem
- It saves decommissioning costs
- It supports the offshore sports fishing and diving industry

Facts:
- US National Artificial Reef Plan 1985
- > 4,500 platforms in GOM; 532 platforms reefed as of Apr 2018
- 50% of costs savings are donated to the program (GOM)
- Similar schemes in California, Brunei and Malaysia
- Prohibited in North Sea by Ospar Convention
Conclusions

1. Organise and integrate inside to deal with the outside:
   a. Set accountabilities, agree roles and responsibilities
   b. Use existing structures, tools and processes
   c. Align, coordinate and integrate; appoint a NTR coordinator
   d. Do the work: identify, analyse, prioritise and act
2. Be early and pro-active to your stakeholders; engage and co-create
3. Mitigate downside risks - and harvest upsides
4. This is more than a process update; it requires a true culture change!
Your Feedback is Important

Enter your section in the DL Evaluation Contest by completing the evaluation form for this presentation
Visit SPE.org/dl
References

1. Internal analysis of Goldman Sachs, ‘Top 190 projects to change the world, April 2008, courtesy of Shell.