

# DIGIREF PROJECT

Simplifying the use of our E&P referential  
through digitalization

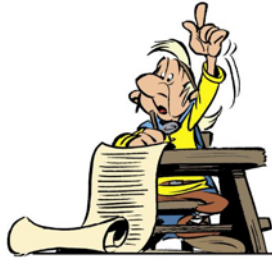


# AGENDA



- **DIGIREF: Starting Point**
- The DIGIREF process: Three simple steps, high added value
- Current Status
- And in the future...?

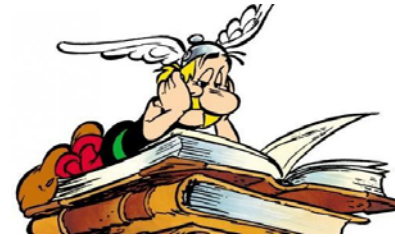
# THE REASONS BEHIND OUR PROJECT



The author



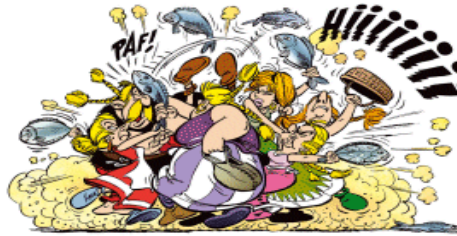
The project engineer



The contractor



Some discussions

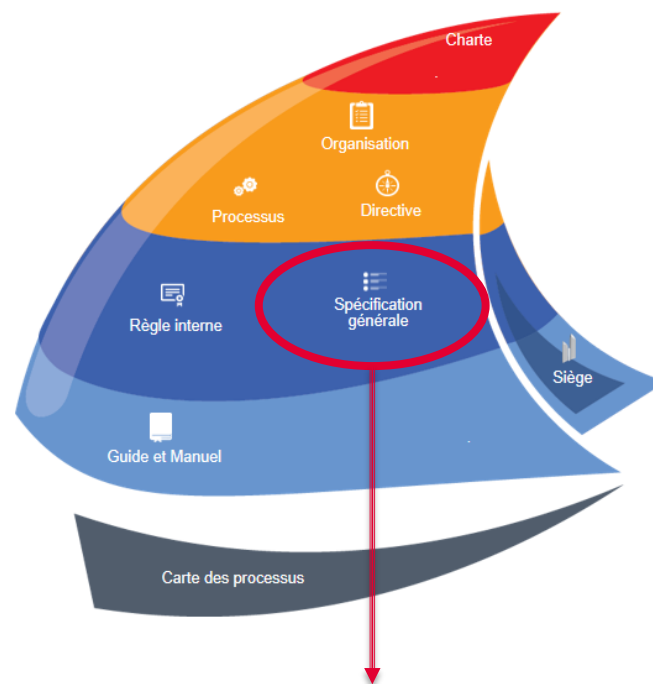


Worst case result

What we want: Happy people through Streamlining technical referential & its use internally & externally



# TOTAL E&P PROJECT PERIMETER



N° of Specifications	Pages	Requirements in perimeter			
		'Shall'	'Must'	'Have to'	TOTAL
516	18,325	100,598	2,469	933	<b>104,000</b>

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# SIMPLIFICATION BY MAPPING CONTENTS

Today

General Specification:  
Historic mix written  
along the years

Mapping  
process




Take the opportunity to  
re-word Technical  
Requirements:  
SMART, one 'shall' per  
requirement, no 'shall' in  
bullet lists

Clear view of  
the contents

- Technical Requirement
- Technical Recommendation
- Technical Information
- Quality Requirement
- Scope of Work
- Basis of design
- Contractual Requirement
- Templates / Attachments
- Document / Deliverables

Allowing reviews to eliminate non relevant items in the future  
(e.g. contractual, basis of design,...) as they are covered elsewhere  
(contracts & contract exhibits)

# SIMPLIFICATION BY CONTEXTUALIZATION



**GENERAL SPECIFICATION**

**CORROSION**

GS EP COR 201

Galvanic anodes

Rev.	Date	Purpose of the revision
10	09/2016	General revision
09	09/2016	Organization change – January 2016
08	03/2014	Revision versus S21 (2499/2013)
07	01/2012	General revision
02	03/2001	First issue

Issuing entity: DBO/TEC      Managing entity: DBO/TEC/COR

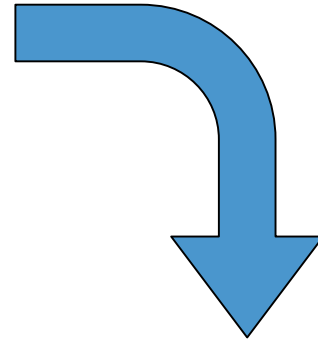
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Authors specify for which object each technical requirement is applicable:  
Users will get all they need for their project or asset...but only what they need!

# CRITICALITY RATING: EASIER DEROGATION PROCESS

Label	Definition
1	<ul style="list-style-type: none"> <li>Requirements imposed by <b>local</b> or <b>international regulation</b> (legislation, company directive, company rule) or <b>Major Integrity Threat</b> (as per CR_HSE_047).</li> <li>Derogation cannot be approved by the Discipline, requires escalation to higher level.</li> </ul>
2	<ul style="list-style-type: none"> <li>Requirements imposed by <b>international standard</b> or with <b>major impact</b> on <b>safety</b> or <b>environment</b> during both project and operation periods.</li> <li>Derogations, approved by the Discipline, to such requirements shall be supported by a <b>complete and detailed risk analysis</b> including mitigation measures and cost/schedule benefit. These derogations can be <b>complex derogation requests</b> (as per FCT-HQ-QUA-310: mainly impacting several disciplines, needing specific studies or external expertise).</li> </ul>
3	<ul style="list-style-type: none"> <li>Requirements related to Company choice between <b>options of a given International Standard</b> or with <b>major impact</b> on <b>cost</b> and/or <b>schedule</b> (including loss of production) or with <b>medium impact</b> on <b>safety</b> or <b>environment</b>, during both project and operation periods.</li> <li>Derogations to such requirements shall be supported by a <b>complete and detailed risk analysis</b> including mitigation measures and cost/schedule benefit. These derogations will be entirely processed by the Discipline (non complex derogation).</li> </ul>
4	<ul style="list-style-type: none"> <li>Requirements for <b>company standardization</b> or not corresponding to any of the other categories.</li> <li>Derogation will no need detailed risk analysis but <b>cost/schedule benefit analysis</b>.</li> </ul>



Criticality rating of each technical requirement accompanied by its justification provide guidance to the user

	Definition
1	<ul style="list-style-type: none"> <li>CL1.1: Requirements derived from local, international or class regulations</li> <li>CL1.2: Requirements derived from Company directives, Company rules.</li> <li>CL1.3: Requirements related SOLAS rules during Towing phases</li> <li>CL1.4: Requirements related optic fibers as main link on projects</li> </ul>
2	<ul style="list-style-type: none"> <li>CL2.1: Requirements derived from International standard requirement</li> <li>CL2.2: Requirement whose derogation will impact several disciplines (mainly HSE and SUR) or additional studies</li> <li>CL2.3: Requirement related to cyber-security thread</li> <li>CL2.4: Requirement related to Safety systems PAGA and POB</li> <li>CL2.5: Requirement related to political exposition or penalty (to be clarified)</li> </ul>
3	<ul style="list-style-type: none"> <li>CL3.1: Requirements related to Company choice between options of a given International Standard</li> <li>CL3.2: Requirements related to measurement equipment precision (such as weather forecast)</li> <li>CL3.3: Requirements related to berthing aid equipment</li> <li>CL3.4: Requirements related to ultima backup telecom systems</li> <li>CL3.5: Requirements related to radio systems (such as loss of communication, personal localization)</li> </ul>
4	<ul style="list-style-type: none"> <li>CL4.1: Requirements related to company standardization</li> <li>CL4.2: Requirements related to Telecom cyber-security</li> <li>CL4.3: Requirements related to installation, commissioning and tests</li> <li>CL4.4: Requirements related to specific vendors solutions</li> <li>CL4.5: Requirements related to other REX</li> </ul>



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## Objectives 2019 - 2020: 100% of perimeter mapped & contextualized 35% of Technical Requirements with a justified criticality rating

	Total nb of docs	516	
	Initial nb of pages	18325	
	Initial nb of 'shall', 'must', 'have to'	104000	
Step 1	Nb of docs digitized OK	385	75%
	Nb of digitized pages	14401	79%
	Nb of work items digitized	81608	78%
Step 2	Nb docs analyzed OK (QC2)	207	
	Nb work items analyzed	35915	35%
Step 3	Nb of criticality analysis of docs	19	5%
	Nb of TR analyzed	2312	2,2%
Overall	Nb of TRs - Nb of 'shall'	-12043	-12%
	Total nb of "others"	5709	5%
	Nb of Quality Requirements	1028	
	Nb of Contractual Requirements	845	
	Nb of Deliverables	1456	
	Nb of Scope items	129	
	Nb of Basis of Design	13	
	Nb of Recommendations	2238	
	New nb of "shall" + TR	91217	88%

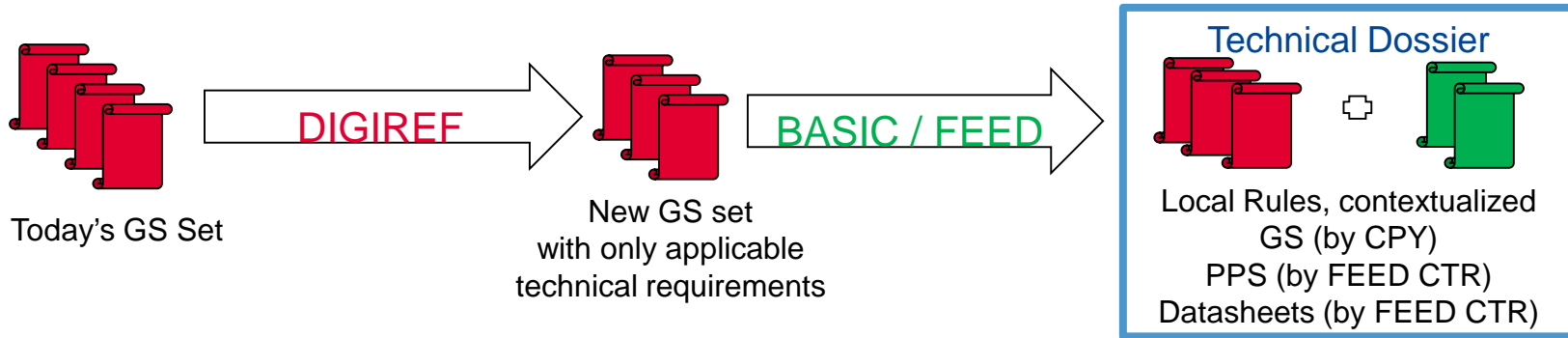
Significant simplification already visible after 8 months

# AGENDA



- DIGIREF: short term objectives
- The DIGIREF process & organization
- Challenges
- Current status
- **And in the future...?**

# FURTHER STEPS & CONTINUOUS IMPROVEMENT



- Review non-technical requirements & eliminate if relevant
- Integrate derogation process
- Demonstrate added value with pilot studies (including with contractors & vendors)
- Optimize the use of cross references
- Capture REX
- Contribute to harmonization within Oil & Gas industry (IOGP, INCOSE,...)

We are only at the beginning of a major change in the way we work!

# THE ULTIMATE GOAL

**‘To transform our technical referential using a digital platform, accessible and appreciated by all stakeholders, to be used with agility and contributing to value creation for our pre-projects, projects and operations’**



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