DSATS Board & Officers Bi-monthly call

June 9, 2022

Agenda

Organizational	
Brief review of the May community call	Dimitrios Pirovolou
Proposal - Form a DSATS Interoperability committee to work with D-WIS	Dimitrios / Darryl Fett
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Community call in May

- The invitation was sent out on April 29 using SPE's Informz email system
- The table on the right shows some statistics
  - More than half of the members did not open the email
  - Only 10% clicked on it
- Lesson to carry forward:
  - Send at least one reminder, maybe even two, in order to get access to more people

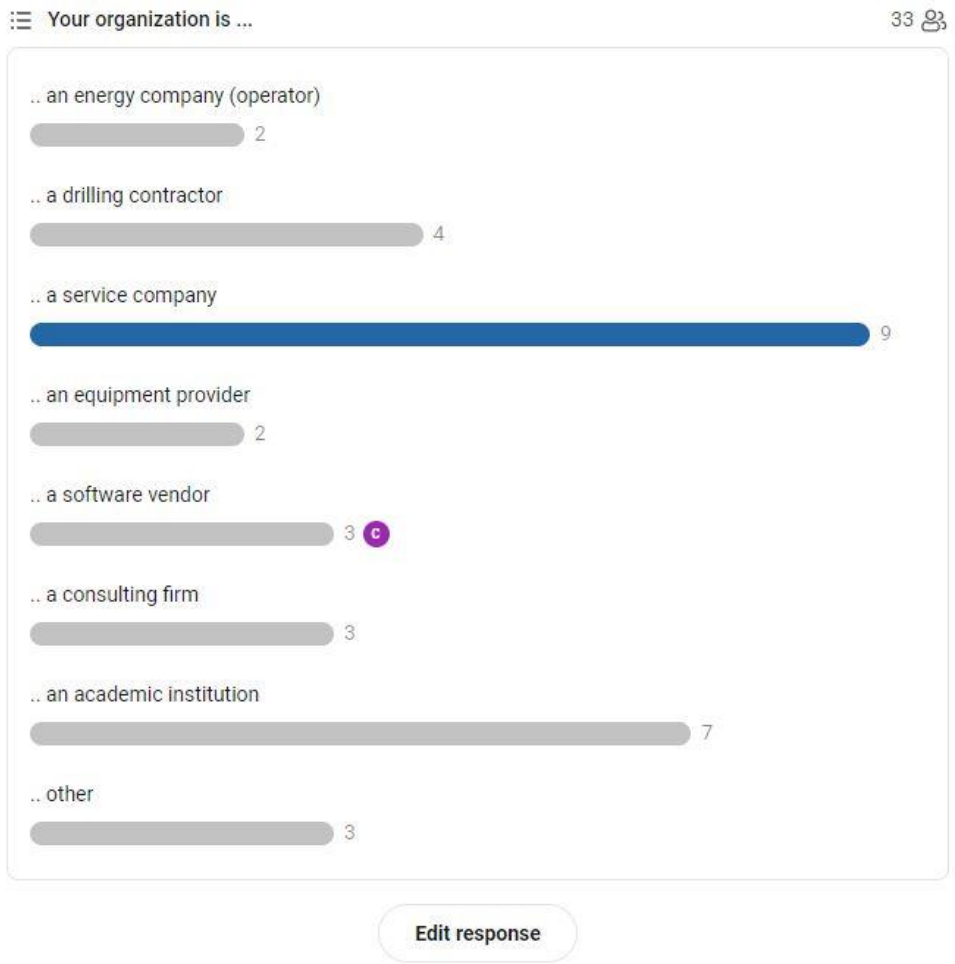
Description	Nr.	%
Recipients	1,685	
Delivery	1669	99.05%
Opened it	702	42.06%
Clicked on it	157	9.40%
Attended the call	40	

Poll results

- Small sample compared to the population (29 or 30 during the polling, 40 for most of the call)
  - Membership stood at ~ 1,700 at the time
- Decent age distribution
  - Ideally, we would have more people from the younger age brackets
- Lesson to carry forward:
  - Should we ask our senior members to recruit younger people in their organizations to join DSATS?

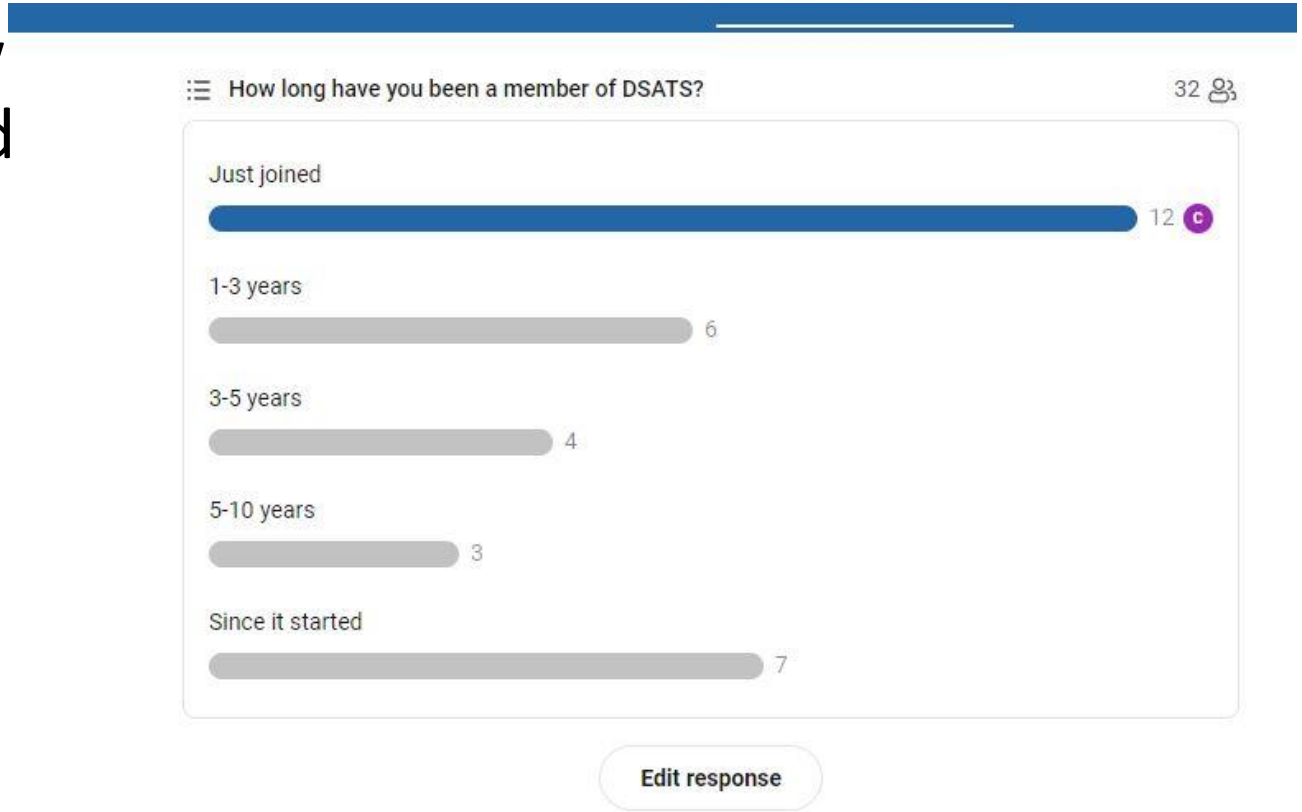
Polling #2 – sub-segment

- Strong representation from the Service sector
- Not so much for Operators
- Decent representation for Drilling contractors
- Lesson to carry forward:
  - Actively pursue & engage more contractors & operators in the activities / sub-committees



Poll #3 – Years of DSATS membership

- It is very encouraging to have new people join the section and attend the calls

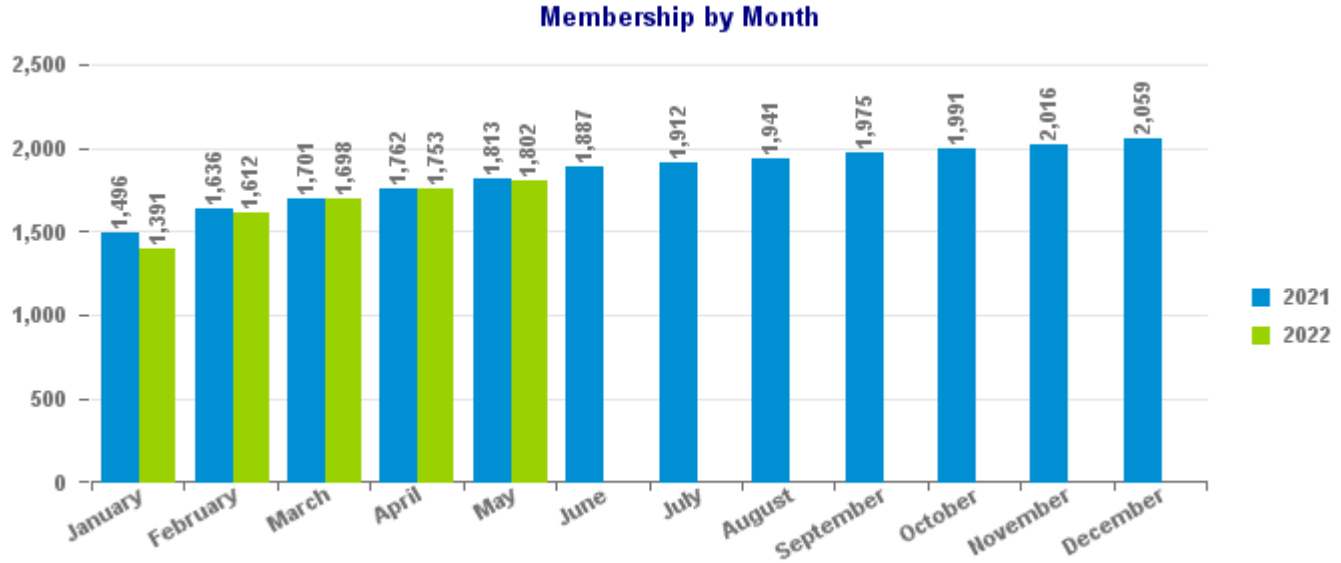


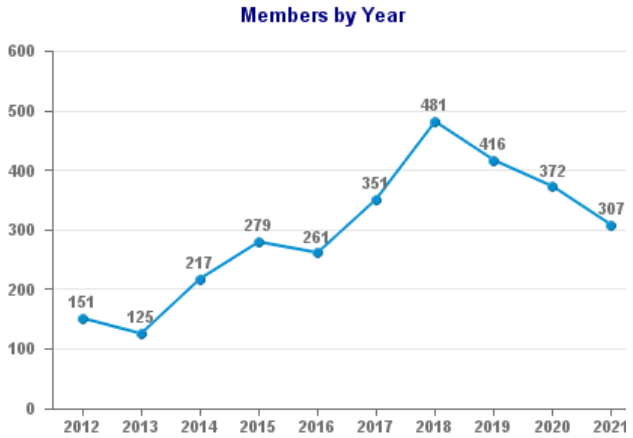
A few other points

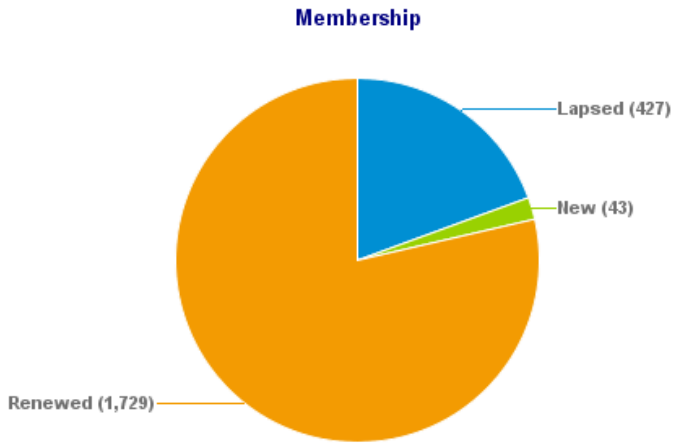
- Overall, the format & content were received well
- The polling worked without issues, but with Slido we have a limit of 200 attendees (probably this is enough for a while)
- For each topic presented, it is good to have a back-up presenter in case the team leader is not available to join the call.
  - These calls with the community can help drive the activity in each sub-committee as they can act as milestones
- A few people from the leadership team were not able to join, which is totally understandable.
  - Is there anything we can do in the planning of these calls to ensure more officers & board members can attend?

DSATS Membership

- Practically flat compared to 2021
- One of the goals for the year is to reverse the declining trend seen since 2018
- Need a plan of action how to attract more new members







DSATS & D-WIS

- Proposal: emulate the WPTS & ISCWSA structure
  - Combine the best of both worlds: Technical Section & Independent Steering Committee
- D-WIS is able to publish its work and collaborate with other industry entities to create guidelines

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Annual report to SPE

	A few of the questions used to assess the health of a Technical Section
1	Does your board have diverse geographic representation? Do you have leadership positions for women?
2	How often and when did your Technical Section hold committee meetings?
3	Do you have a succession plan?
4	How do you transition Technical Section records and train new Officers?
5	How has your Technical Section contributed to SPE International publications, events, and other technical activities?
6	How has your Technical Section promoted SPE programs and benefits?

Annual report to SPE (cont'd)

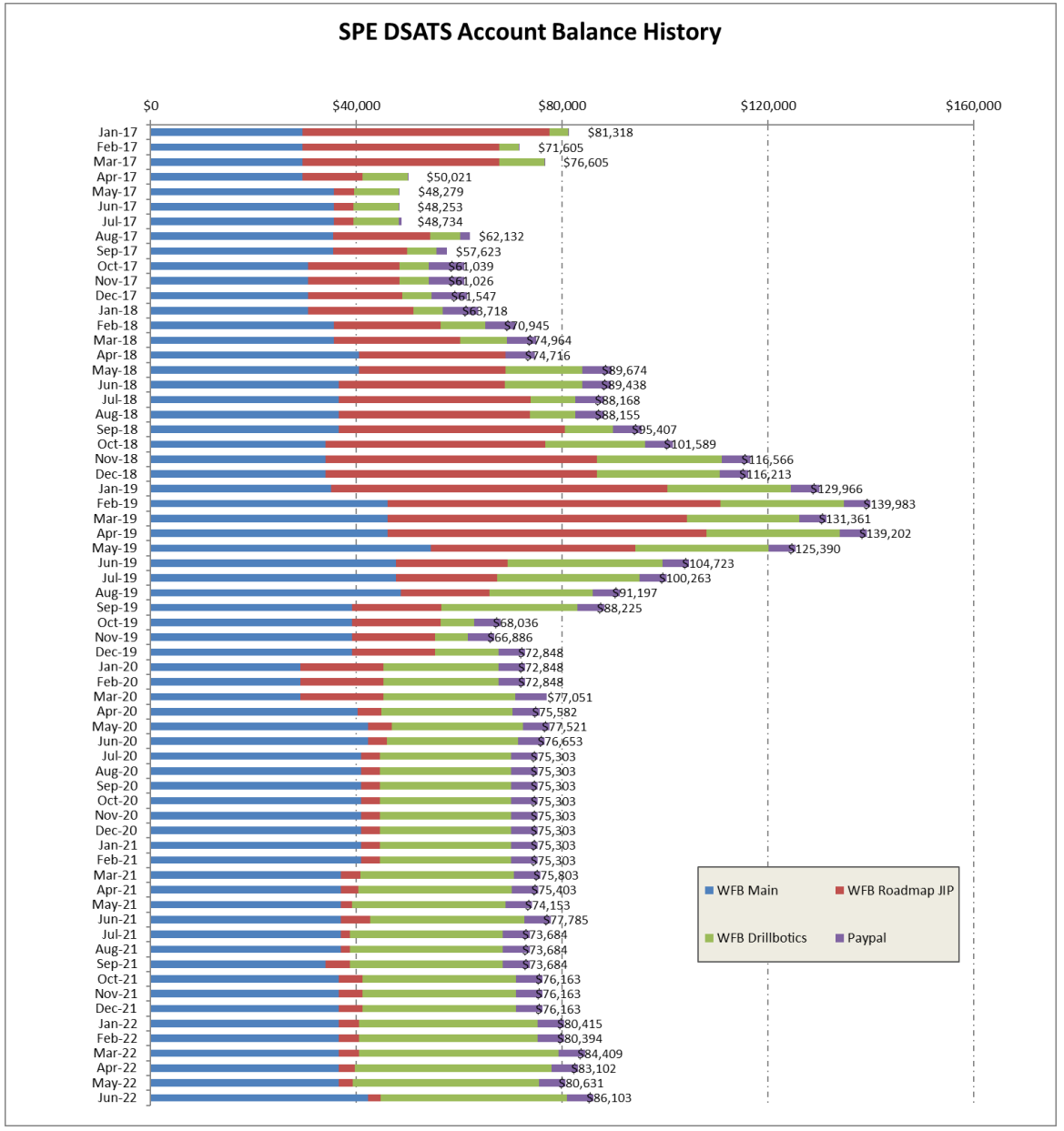
	Additional questions to be considered for an Outstanding Technical Section Award
1	Does your Technical Section keep your website updated with quality and relevant information? In what other ways do you communicate with your members?
2	What new and innovative activities has your section planned? Have you employed any new and effective ways of managing your section?
3	How has your Technical Section educated the public about the industry and SPE?
4	Describe any member and recruitment activities.
5	Has your Technical Section participated in any community service activities? Please describe.
6	In what ways has your Technical Section collaborated with others including the Technical Directors, other Technical/Geographic Sections, and related societies?
7	Does your Technical Section have a section awards program? Do you recognize and show appreciation for section members' contributions, including recognizing women in the industry?
8	Does your Technical Section balance activities across generations, work experience, and technical disciplines?

Webinars

- Three webinars in the pipe-line:
  - Interoperability (SigmaStream)
  - Case study on quantifying risk reduction & value created by automation (Safe Influx)
  - D-WIS – An interface to enable plug-n-play Interoperability

Financials

SPE-DSATS Wells Fargo Bank Accounts/PayPal Status (June-2022)			
Main (x7408)	6/8/2022	**Balance:** 5/19/22: SPE Reimbursement for SPE/DSATS IADC 2022 DSATS Symposium - $5,671.82	(May) $36,547.39 (Jun) $42,219.21
Roadmap JIP (x7390)	6/8/2022	**Balance:** 6/7: DEWCO Web maintenance/update - $200	(May) $2,756.86 (Jun) $2,556.86
Drillbotics (x6038)	6/8/2022	**Balance:** No activity	(May) $36,168.96 (Jun) $36,168.96
PayPal Account	6/8/2022	**Balance:** No activity	(May) $5,157.73 (Jun) $5,157.73



Summary from Symposium

- Sponsorships
  - Two Platinum (Baker & NOV) - $2,500
  - One Gold (Total) - $1,500
- A/V for the extra day was $4K, and covered by the SPE allowance

INFLOWS	
Registration	$ 2,520.00
Sponsorships	$ 6,500.00
TOTAL	**$ 9,020.00**

Outflows	
A/V Equipment	
Coffee	$ 817.78
Food	$ 1,674.00
Drinks	$ 856.40
Total	**$ 3,348.18**

Net deposit	**$ 5,671.82**

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Drillbotics

- Phase II testing for the 2022-2023 competition scheduled for week 24 (Jun 13-16). Judges will select the winners the following week.
- Submitted abstract for 2023 SPE Drilling Conference for this year's winning team to present next March. Focus on need for multidisciplinary teams and human factors, something often needed by our industry today.
- Challenge Team will meet over the summer to update Guidelines for the 2022-2023 competition.
- Hope to create a scholarship program to partially fund teams with a needs-based program to encourage more participation, especially from schools with limited funding.

D-WIS Update

- Three work-streams hold weekly meetings
  - Fault Detection, Isolation, and Recovery (FDIR)
  - D-WIS Interface
  - System Architecture
- Trying to bring in more contractors
- Pursuing this through the ART group
  - Present D-WIS at their annual Conference & Exhibition in Austin on Aug. 30 & 31
  - Present the D-WIS work at the DCS sub-committee meetings

2022.06.09

Verification & Validation Initiative

Core team:

Matthew Forshaw
Baker Hughes

Dimitrios Pirovolou
Weatherford

Bryan Atchison
Safe Influx

Mark Gillard
Safe Influx

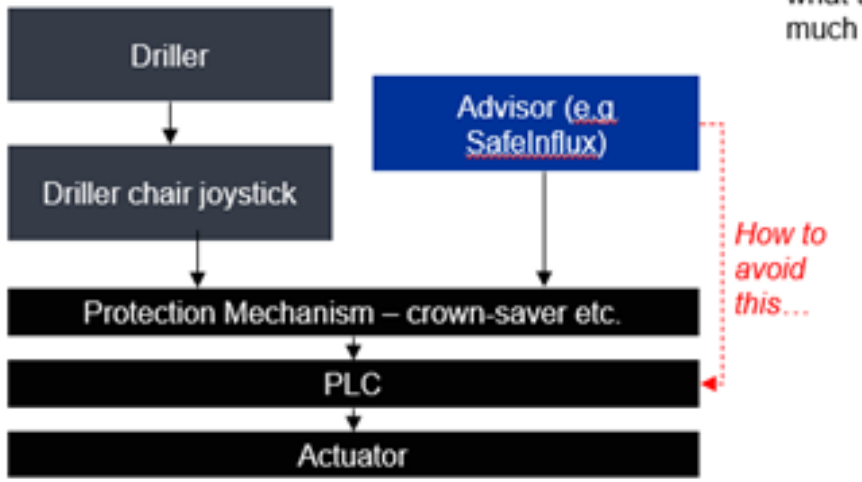
Sathianandan (Sam) Dharmaselvan
ENSIGN

Moray Laing
HALLIBURTON

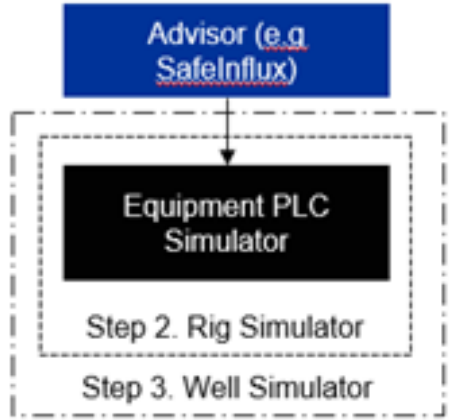
Status:

- Two meeting completed (Tuesday 17th May & Tuesday 7th June) inc. update on D-WIS from Dmitriy Dashevskiy.
- Tri-weekly meeting rhythm setup going forwards. **Next meeting Tuesday 28th June 3pm Europe, 8am Houston**
- **Actively looking for operator, OEM and rig contractor participation**
- Drafting charter to be circulated by e-mail for formal board approval

Re-occurring question: *"Do 'Advisors' need assurance that rig actuator PLC based protection systems (e.g. hoist/lower anti-collision, max RPM etc.) are in-place to enter an 'automated' mode and pass setpoints?"*



Potential step-wise approach, looking first at verifying Advisor compatibility with simulated equipment PLCs, followed by rig sim. Point raised that full V&V with a well sim. really does not achieve what the group is aiming for, and perhaps verges too much of evaluating competitive capabilities.



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	Proposed Initiatives from the V2 group	+ Main points & action items from the break-out sessions of the Symposium	= Proposed DSATS Activities	
			Description	Status
1	Interoperability	• Automation will not break through until we reach certain levels of interoperability • How do we enable ecosystems (or system of systems) instead of silos? - Provide common language / interoperability - This has to be driven by operators	Interoperability - DWIS	On-going
2	Accelerate the implementation of technology	• Quick adoption requires a 10x improvement. How do we get fast adoption when offering only incremental improvements? • What is the upside of Automation when we drill a mile-a-day?		
3	System-of-systems – standardize & identify best practices	Identify actions that are outside the scope of Automation: • What Level of Automation we target for the various activities? • System of Systems: to what extent we automate this coordination?		
4	Human factors: train the next generation to work with automated systems; Interaction with other sections.	How do we avoid distracting the operator when they are already very busy?	Open	Shashi
5	Missing context & meta-data			
6	Well control & broader drilling optimization	• Automation also applies to Planning. Moreover, we need to close the loop and transfer any lessons learned during the Execution back to Planning, automatically. • Configurations & Scenarios: the system is able to compare dynamically what is happening in the Execution phase vs. what was planned. Parameters or configurations can be adapted on the fly based on this learning (in addition to the off-line learning).	Very broad topic: • The proposal from Paul for using downhole drilling dynamics data falls under here.	Voting on this proposal today
7	• Facilitate knowledge sharing • Education: ATW, publications, workshops, what else? • Working with API, best practices, guidelines etc.	• How do we reach a level of multi-party contractual agreement where everyone is rewarded at an equitable level? - Can IADC help draft such a template of a contract?	Webinars, ATW, Forums New DSATS website Working with entities that can produce guidelines	On-going Collecting requirements Looking at available options This is work in progress, currently through the DWIS work
8	ESG		Open	
9	Verification/validation of automation algorithms/systems	• The system will be able to handle any abnormal situations that arise during the execution phase. • Watch for the unintended consequences when we bring together several technologies that were developed separately, without coordination - Poor planning is often responsible for early failures and slow pace of adoption • Permutations of combining products & services from different vendors - Are we going to test each unique combination? - How do we ensure any combination is safe and reliable, and human-proofed? • These obstacles need to be overcome for the 2025 vision to materialize, even in 2030.	V&V sub-committee	Voting on the proposal today
10	Address the silo/fragmentation of our industry – explore business-related ideas how to overcome these challenges	• Share more data – break the silos, co-operate more • Define a more holistic vision for 2030, not just one of the execution phase • Will higher oil prices become an obstacle for the increased level of collaboration we have seen the last 18 months? - Will companies go back to working alone? • What are the immediate next steps? - All agree that the barriers are not technical, but there is no agreement on how to address them - Reduce uncertainty, Use real-time data to make smarter decisions • How do we align the value chain, and accelerate the roll-out? - Everyone involved needs to have a business gain (not necessarily a cut) **- One (technical) challenge is how to measure success** • With Automation it is a multi-party interaction - How do you identify the contribution of each one of them to success or failure? It cannot all be attributed the old way • Some more radical change is needed to make a multi-party collaboration work well? - Involve Legal, Supply Chain & Procurement to the conversation **- Explore & Exploit new technology - Need KPI's to promote both**	The big white elephant in the room Open Source Drilling Community	On-going
11	Use lessons / good practices from outside the industry			
12	Learn from the WPTS example how to create guidelines through a semi-external entity (ISCWSA).		Adopting a similar structure for D-WIS	

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Conclusions

- The annual report high-lighted several areas where we can do even better
  - Attracting new members
  - Communicating with the community
  - Publications
  - A few others….
- More consistent engagement is needed
  - Is meeting every two months sufficient?
- Mark your calendars: Community call on July 14, 8:30am – 10:00am