

Project Schedule Health Check

Hamza Afdhal Mehdi Mirza - Petroleum Development Oman



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Petroleum Development Oman



Project Controls
EXPO
London, UK

About the Speaker

- Technical Services Lead within FEED Office, Petroleum Development Oman
- 10+ years experience in Project Controls within Oil & Gas Industry
- Led various continuous improvement initiatives within Planning & Scheduling, Cost Engineering, Risk Management, Change Management, Projects Reporting and Project Health Checks.
- Worked with Multi-billion-dollar projects and developed Project Controls expertise in all key phases of a project from Initiation phase to final handover
- Hands-on experience in various Project Controls products, e.g., Oracle Primavera, MS Projects, EcoSys, Easy Risk, Acumen Fuse, SAP, Tableau, SPO etc.



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About the Topic

- ☐ Why Schedule Quality is Important?
- ☐ What challenges faced while quality checking a detailed project schedule?
- ☐ How we identify the ambiguities and improve the preparation of our schedules?





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8,900
Direct Staff

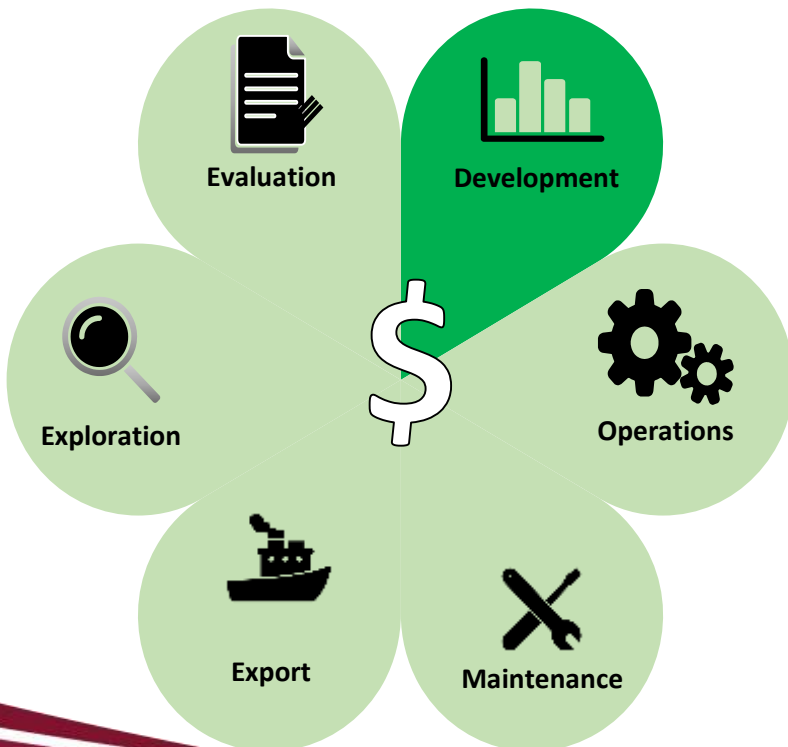
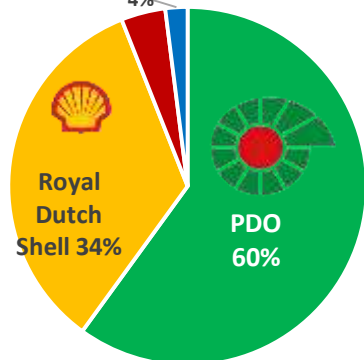


60+
Nationalities



70,000+
Contracting
Employees

Private Shareholder 2%
4%



8,400+

Active
wells

200+
Producing
oil fields

230+ Operating
units

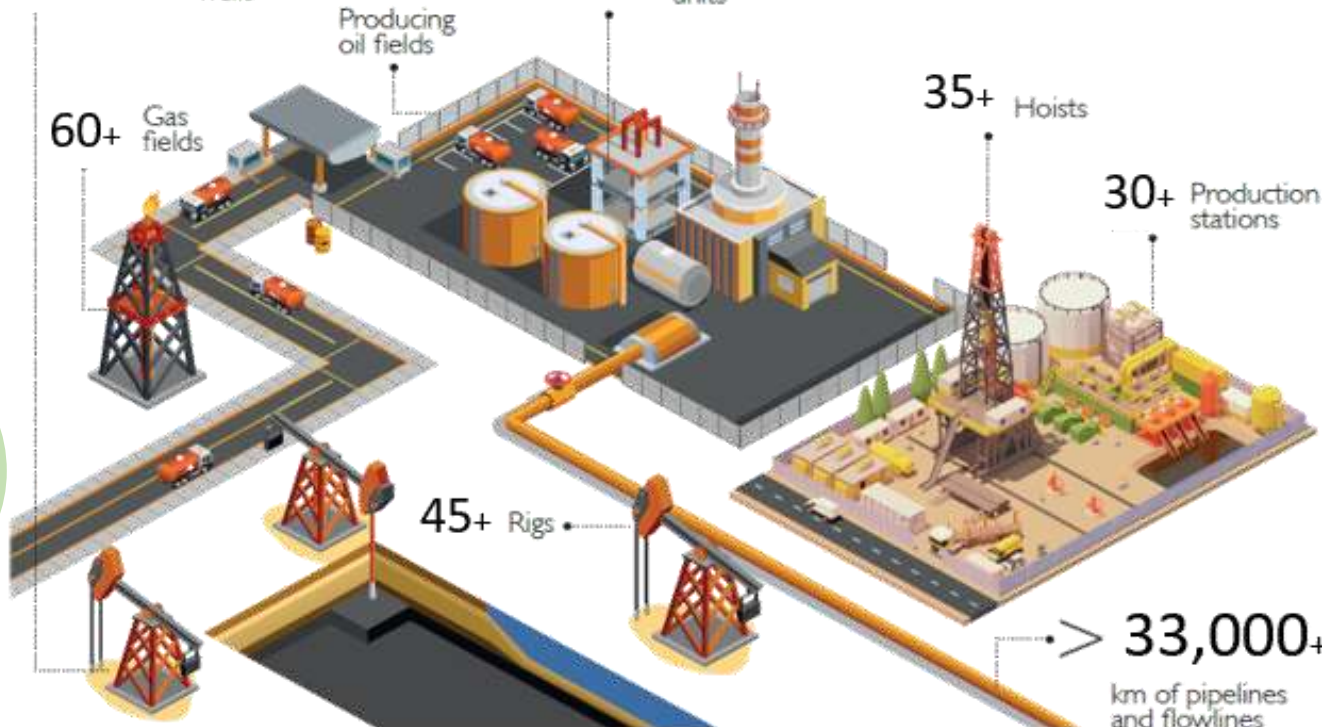
60+ Gas
fields

35+ Hoists

30+ Production
stations

45+ Rigs

> 33,000+
km of pipelines
and flowlines

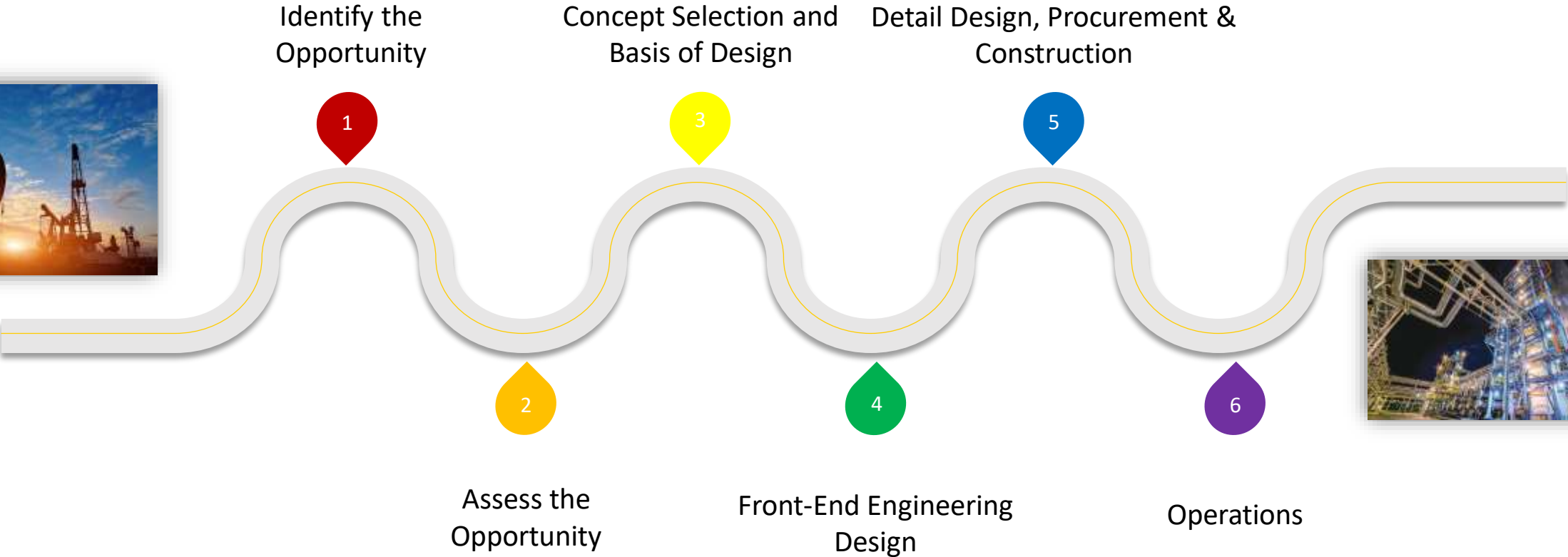


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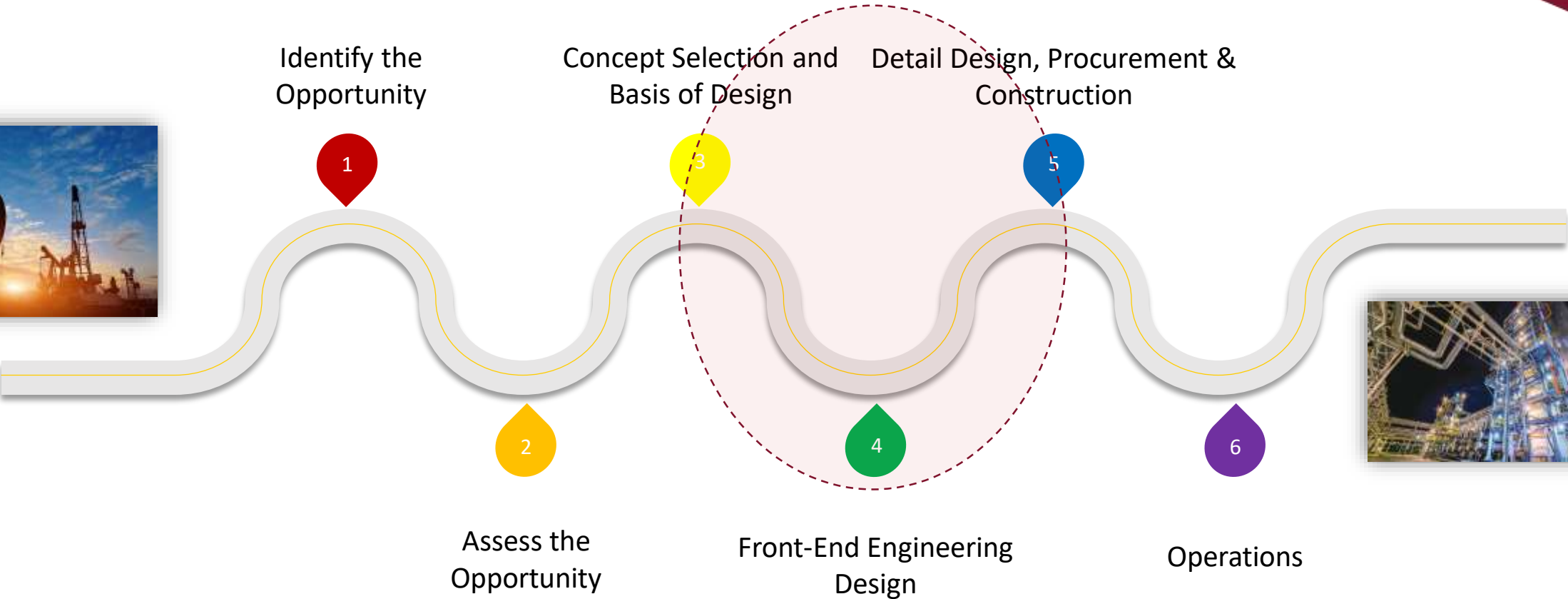
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Opportunity Realisation



Opportunity Realisation

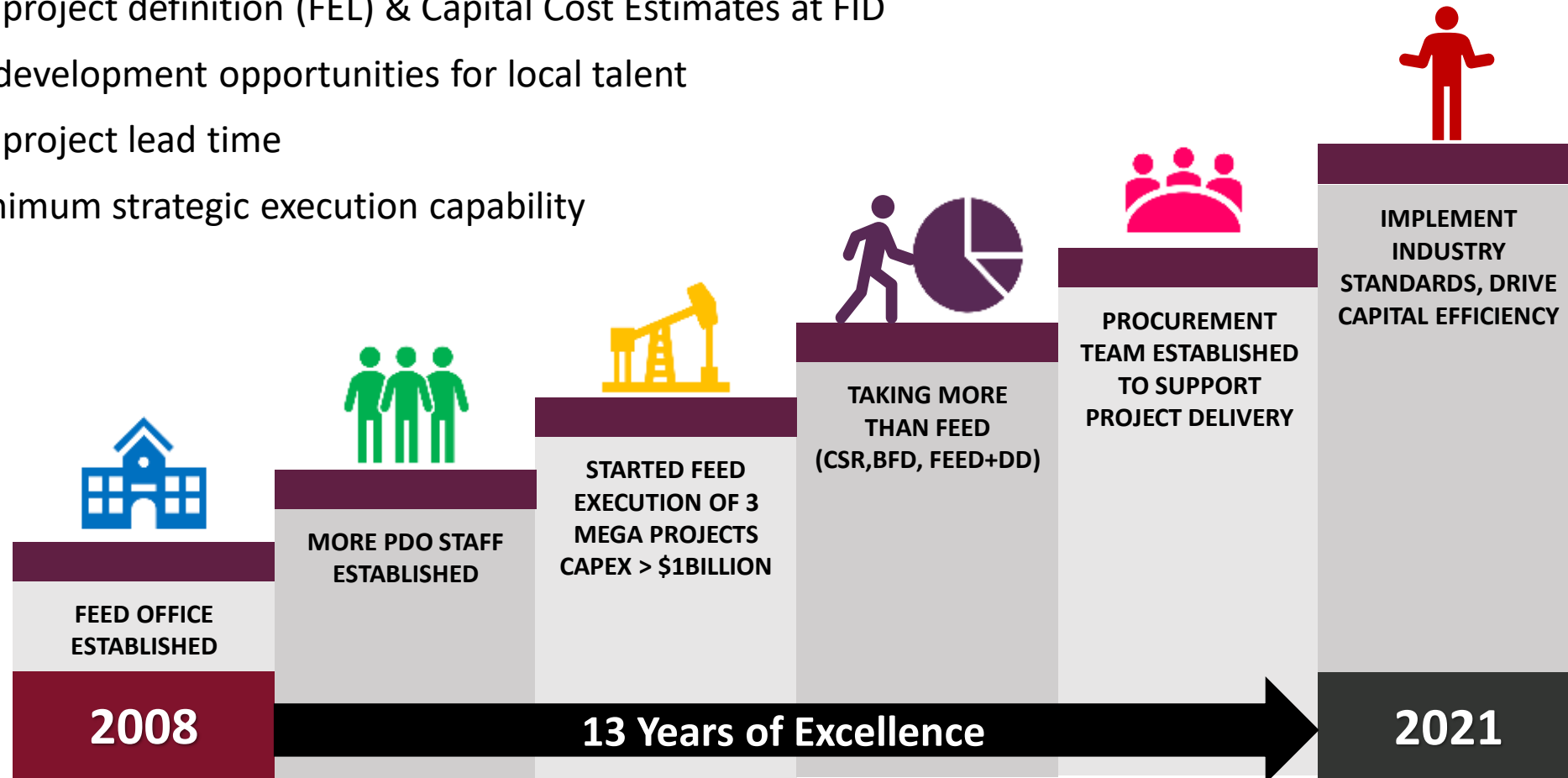
FEED Office Scope



About FEED Office

PDO FEED Office set up in 2008 with the following objective:-

- To improve project definition (FEL) & Capital Cost Estimates at FID
- To provide development opportunities for local talent
- To improve project lead time
- To have minimum strategic execution capability

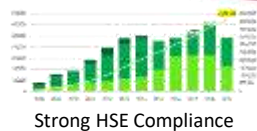


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Key Achievements



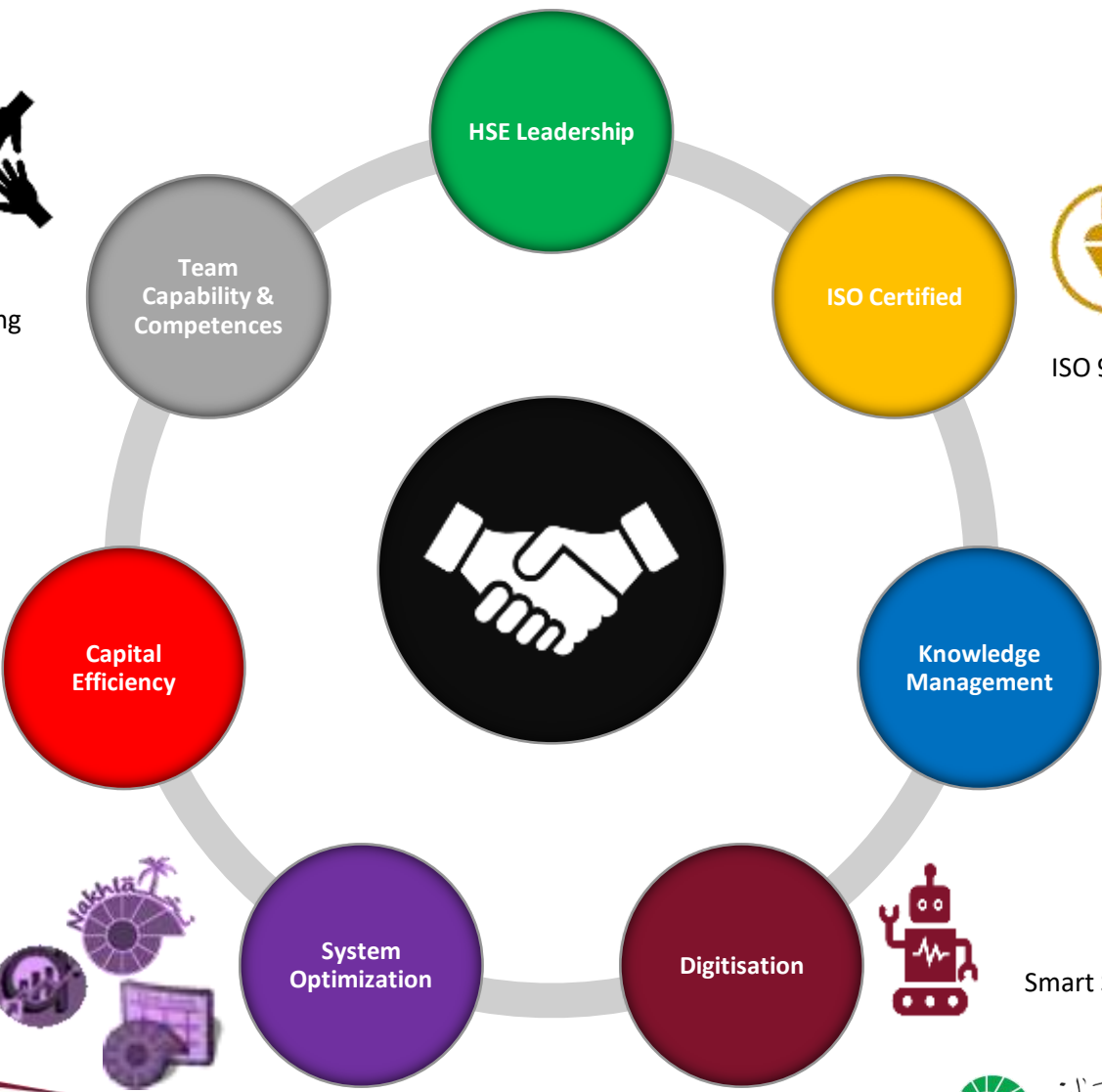
Assets / Function ad-hoc support, Developing Local Talent (Engineers & Designers)



Standardisation, DEMs Compliance, In-house Workshop facilitations, Combine Milestones, Cost Focused since FEED Office inception



In-house developed integrated tools & systems



HSE Leadership

ISO Certified

Knowledge Management

Digitisation

System Optimization

Capital Efficiency



ISO 9001:2015 Certified – No NCR reported to date, Improved Customer Feedback score



Engineering Training, Monthly Knowledge Sharing



Smart Sizing Calculation Tools, RPAs

Project Controls Function

Below are the key functions of Project Controls followed within FEED Office



Initiate

- Establish Scope & WBS
- Initiate CTR Development
- Prepare PAF and seek budget approval



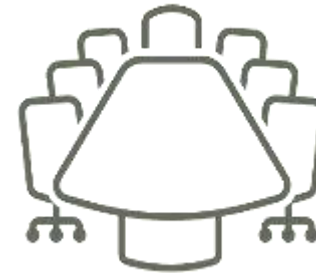
Project Set up

- Schedule Development & Set Baseline
- Setup Progress Measurement Sheet
- Setup Reporting systems



Monitoring & Reporting

- Monitor, Measure and Report actual progress
- Update Schedules and Re-forecast on Monthly Basis



Change Management

- Maintain Change Control Register
- Conduct impact assessment
- Schedule Re-baselining and Revise Progress Measurement System
- Update Cost Reporting

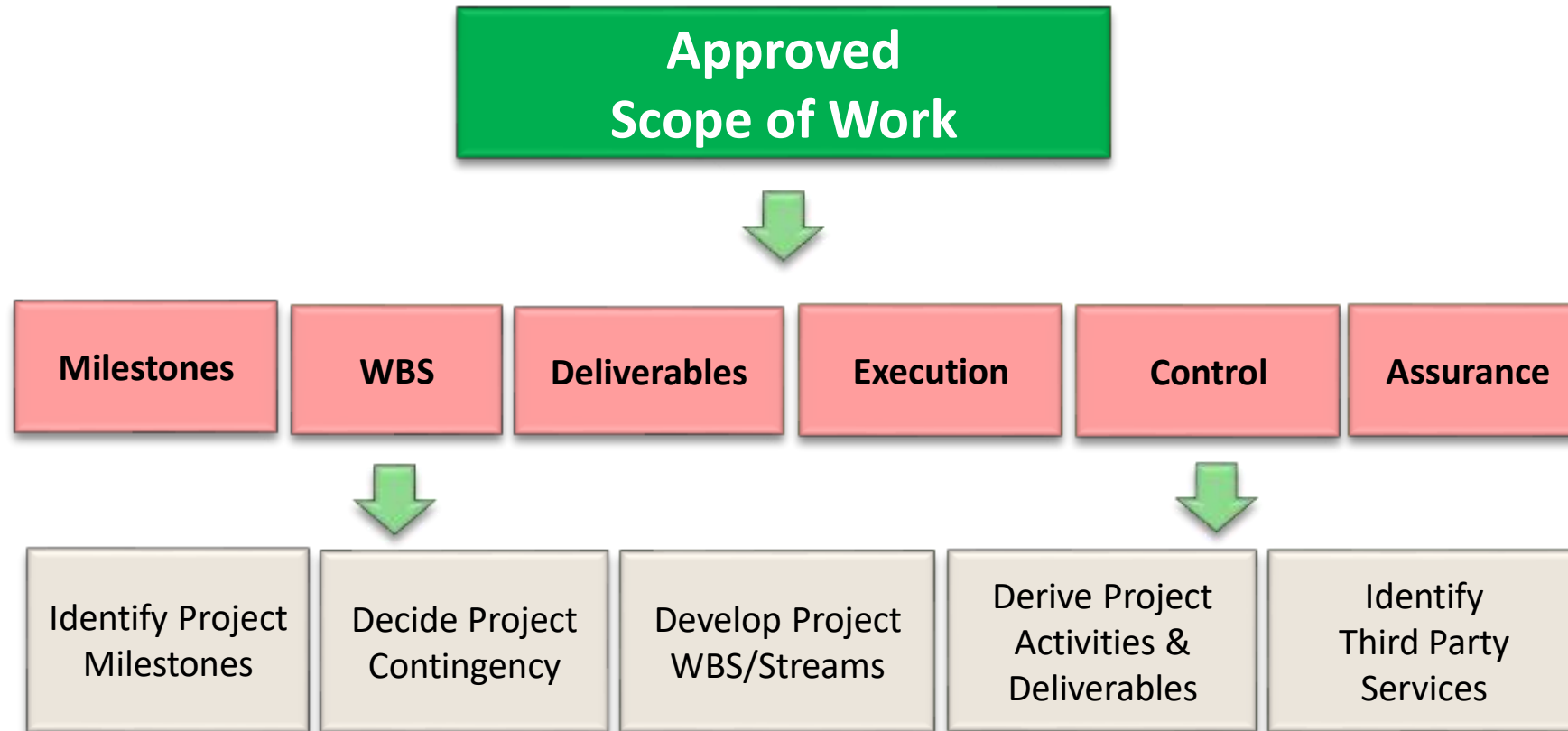


Project Closeout

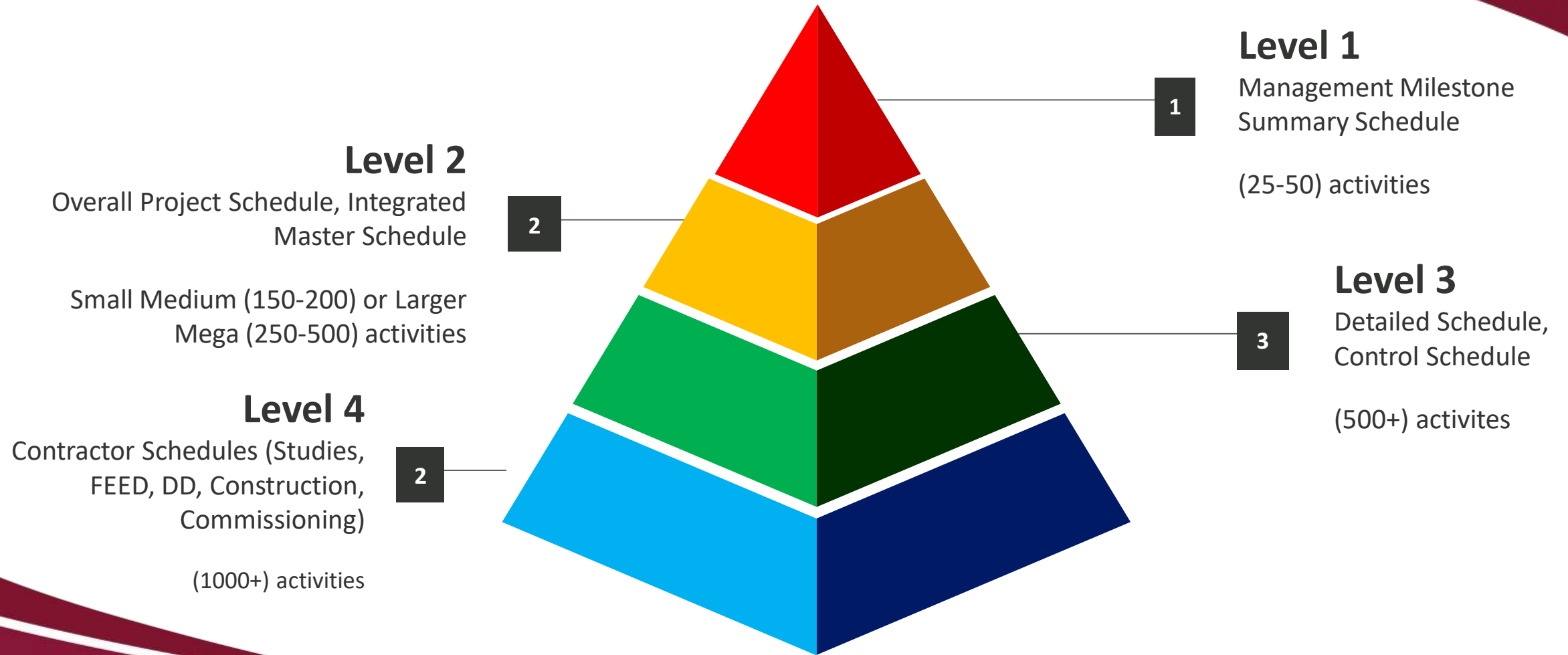
- Capture Lesson Learn
- Ensure close-out of all actions
- Support in Project Close Out



Scope Establishment



Level of Schedules

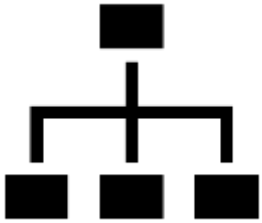


Challenges - Project Schedule



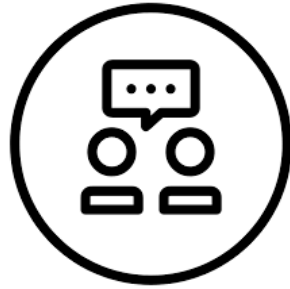
Ideal Project Schedule

What an ideal Project Schedule should consist of ?



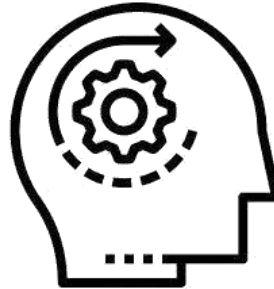
Ideal Structure

Well defined Work Breakdown Structure (WBS), Milestones and Activities



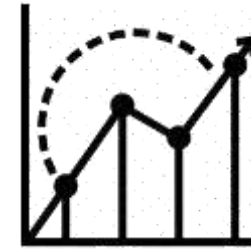
It's Realistic

Understand what can be achieved realistically (inclusive of Risks and Opportunities).



Logically Sound

If logic within a schedule is missing, chances of having a lot of float is possible, which results in delay. Having the necessary logic in place is a must.



Benchmarking

Compare the project with an actual completed project or conduct industrial benchmark



Customer Needs

Meeting the key stakeholder's expectations and Project Value Drivers, Buy-in from the Project team



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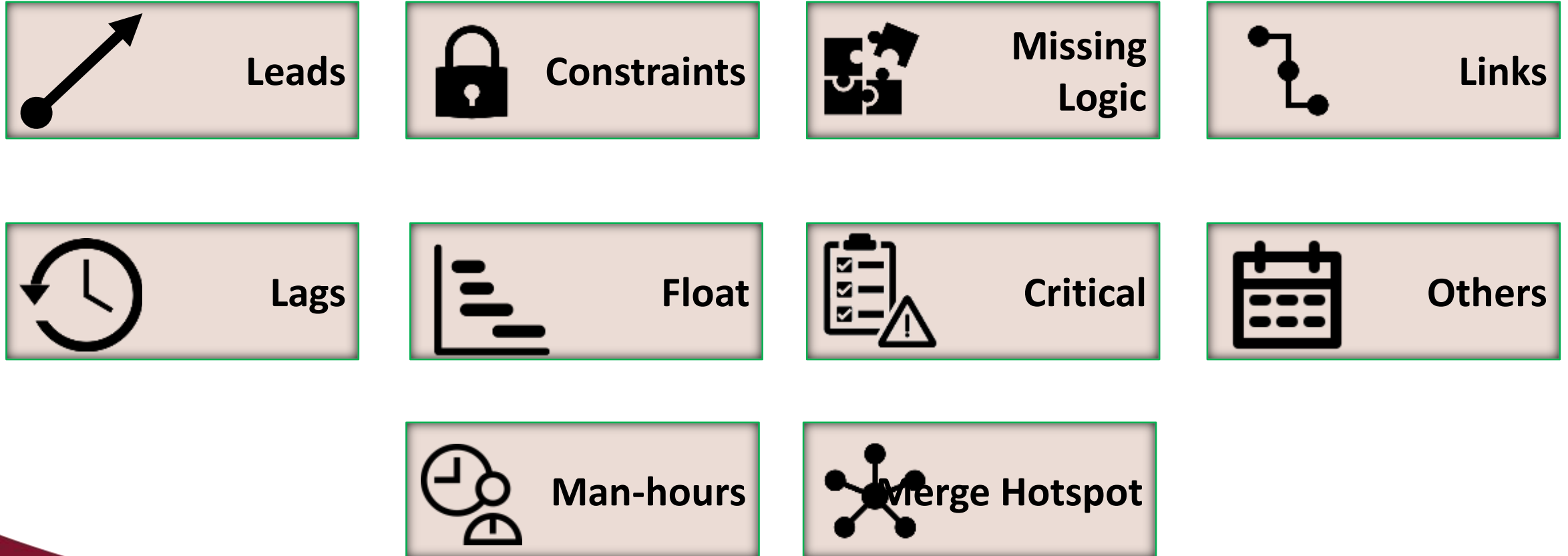
Objectives - Schedule Health Check

- ☐ Simple and Easy to use
- ☐ Consistency with general acceptable industrial schedule management practices
- ☐ Measure and demonstrate robustness of a schedule
- ☐ Cost saving, not buying any schedule assessment software
- ☐ Time saving while preparing and quality checking schedules
- ☐ Easy to modify the assessment criteria / parameters (tailor made solution as per business needs)
- ☐ Effortlessly detect accidental errors
- ☐ Benchmark the project schedule with previous projects or industrial benchmark



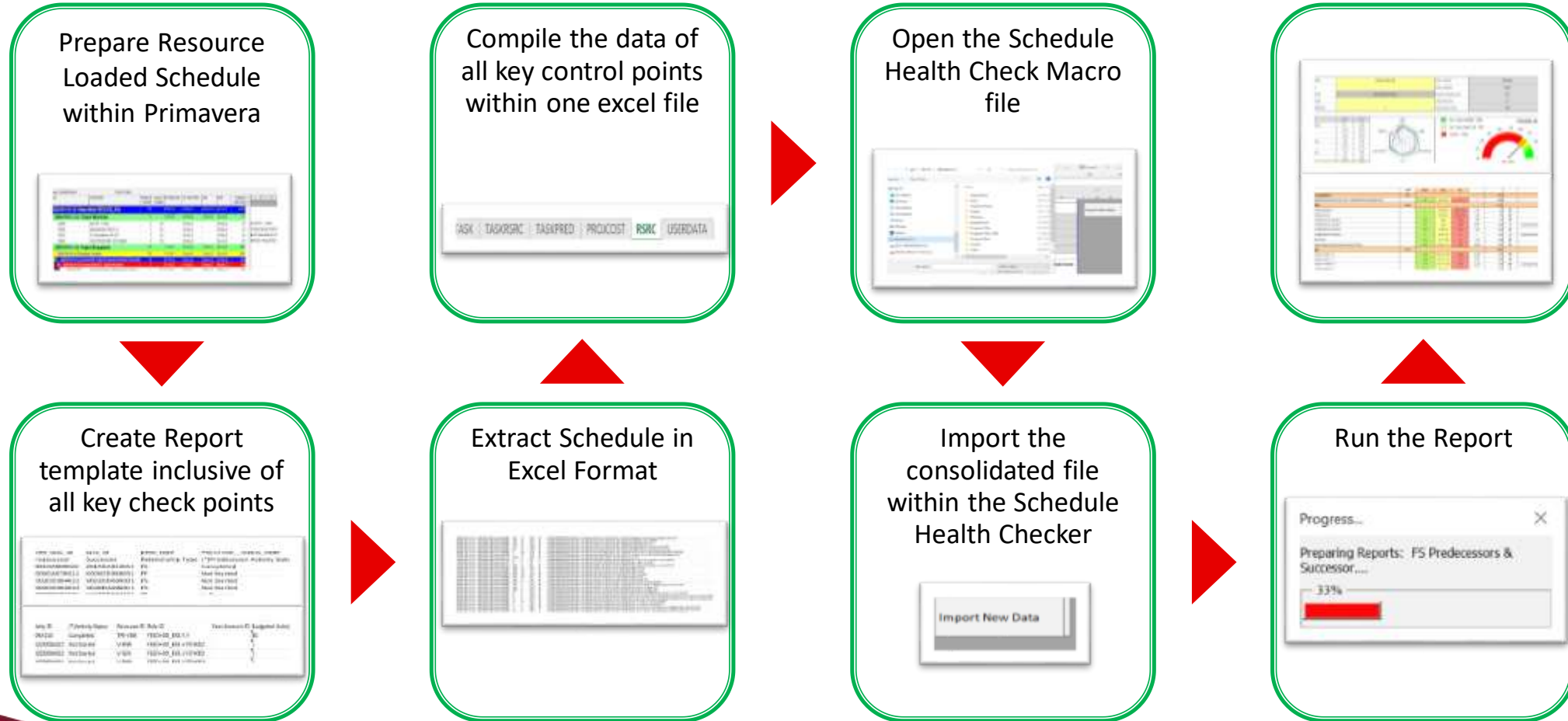
Check Points - Schedule Health Check

Some of the key check points to monitor the overall schedule quality



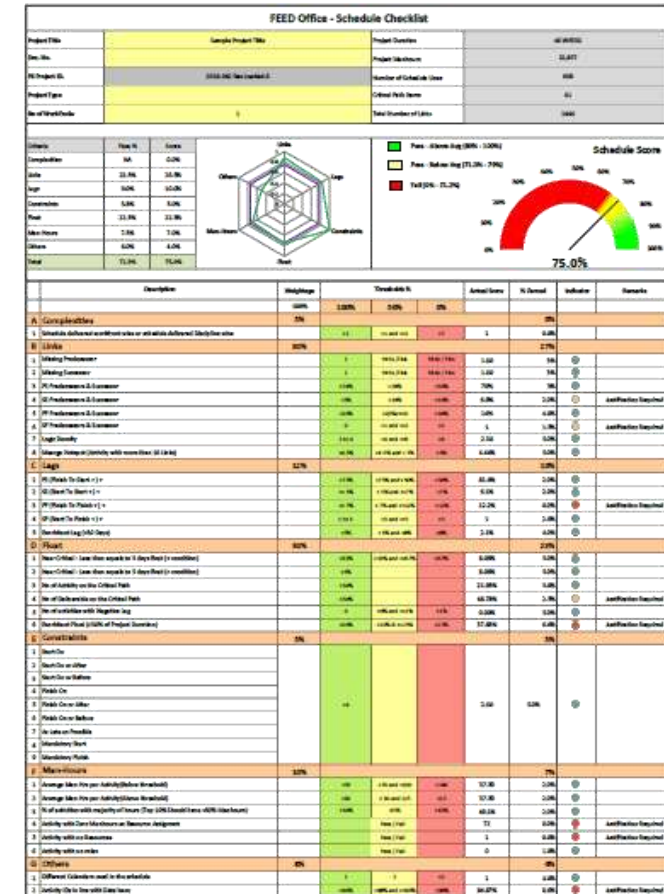
Methodology - Schedule Health Check

End to End process, conducting a Project Schedule Health Check

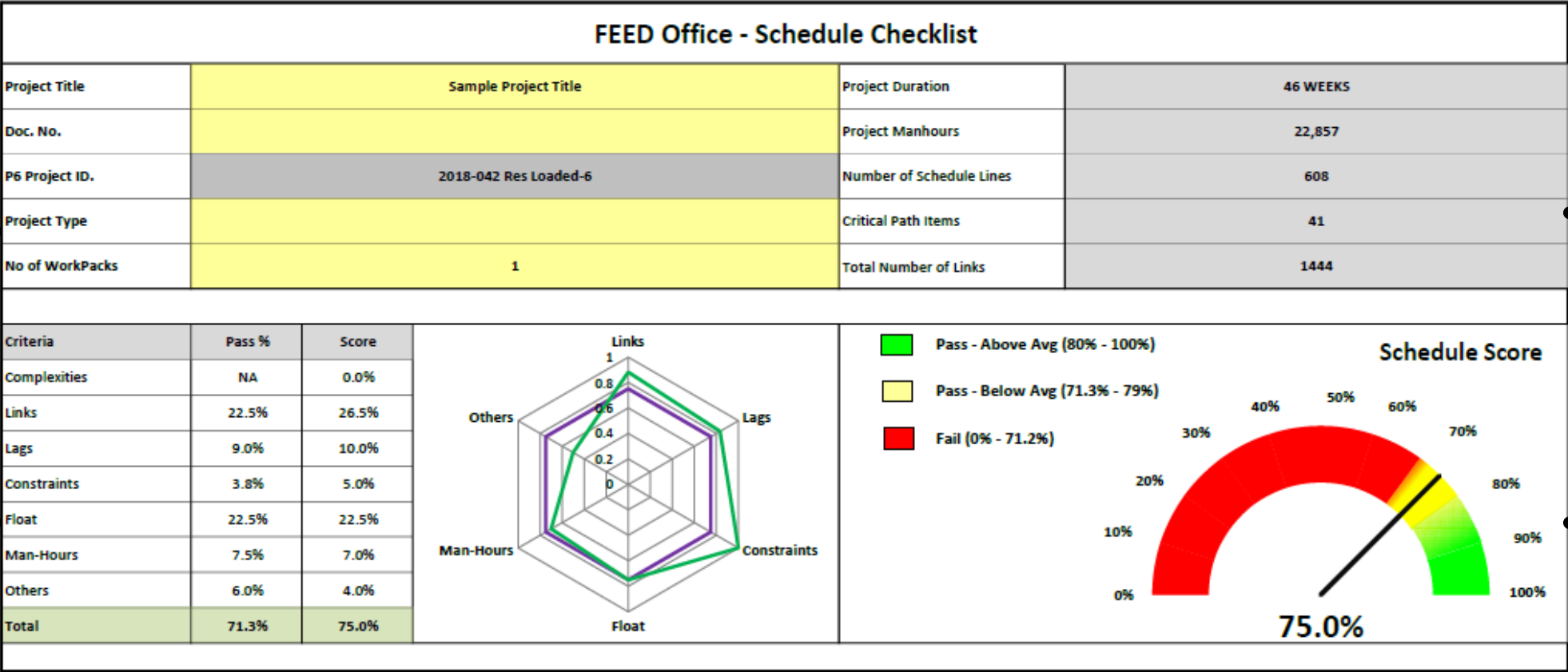


Key Features - Schedule Health Check

Description	Schedule Health Check
Reporting Format	Word, Excel or PDF
Missing Logic	✓
Logic Density	✓
Critical Activities	✓
Hard Constraints	✓
Negative Float	✓
Number of Lags	✓
Number of Leads	✓
Merge Hotspot	✓
Activity ID in line with Database	✓
Activity with no Roles / Resources	✓
Calendar used in the schedule	✓



Reporting Styles



Reporting Styles

Weightage

Check points

	Description	Weightage	Thresholds %			Actual Score	% Earned	Indicator	Remarks
		100%	100%	50%	0%				
A	Complexities	5%					0%		
1	Schedule delivered workfront wise or schedule delivered Discipline wise		>2	>1 and <=2	>7	1	0.0%		
B	Links	30%					27%		
1	Missing Predecessor		1	PASS / FAIL	PASS / FAIL	1.00	3%	●	
2	Missing Successor		1	PASS / FAIL	PASS / FAIL	1.00	3%	●	
3	FS Predecessors & Successor		>74%	>50%	<50%	79%	3%	●	
4	SS Predecessors & Successor		<5%	<10%	>10%	6.9%	2.0%	●	Justification Required
5	FF Predecessors & Successor		<20%	>20%=<30	>30%	14%	4.0%	●	
6	SF Predecessors & Successor		0	>1 and <=2	>2	1	1.5%	●	Justification Required
7	Logic Density		2 to 4	>4 and <=6	>6	2.38	5.0%	●	
8	Mearge Hotspot (Activity with more then 10 Links)		<4.5%	>4.5% and < 5%	>5%	4.44%	5.0%	●	
C	Lags	12%					10%		
1	FS (Finish To Start +) +		>75%	<75% and >50%	<50%	81.4%	2.0%	●	
2	SS (Start To Start +) +		<= 5%	> 5% and <=7%	>7%	6.1%	2.0%	●	
3	FF (Finish To Finish +) +		<= 7%	> 7% and <=12%	>12%	12.2%	0.0%	●	Justification Required
4	SF (Start To Finish +) +		1 to 3	>3 and <=5	>5	1	2.0%	●	
5	Exorbitant Lag (>30 Days)		<5%	>5% and <8%	>8%	2.1%	4.0%	●	

Parameters

Actual Score Traffic Light Indicator



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In Summary

- ❑ Significant improvement in the overall schedule quality, issues and concerns are now resolved in a matter of seconds with no further time spent on manual data validation techniques
- ❑ Can be modified as per the business needs, parameters can be re-adjusted
- ❑ Benchmarking is the key aspect, Improving schedule quality gradually helps in standardize the schedule, keeping the tool updated as per the industrial norms and improve competitiveness within the organization
- ❑ Assisted in developing our internal capability and providing a solid foundation for our young project services community



Q & A



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THANK YOU



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