

### INTEGRATED LIFECYCLE ASSET PLANNING

A digital industry solution making scheduling data interoperable

Interoperability across sectors 23.10.2024



**Heljar Ballo** 

Chair ILAP Steering Committee, Offshore Norge

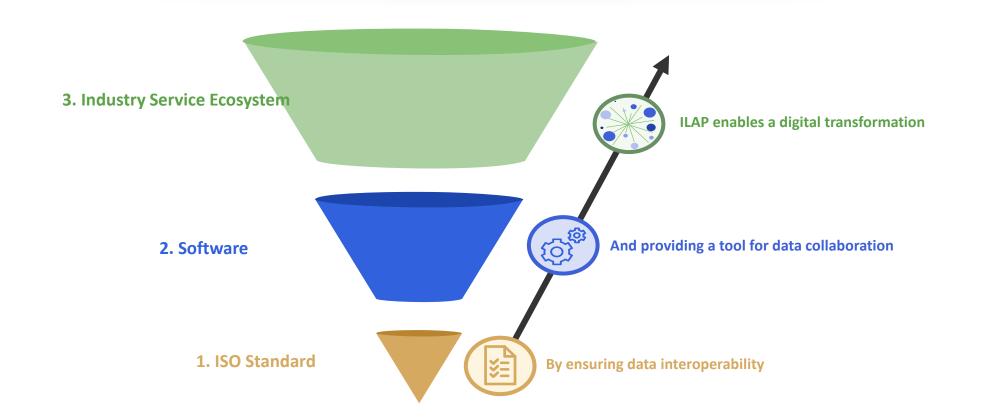
#### THE THREE PILLARS OF ILAP

INTEGRATED LIFECYCLE ASSET PLANNING



Open global data standard Software enabling collaboration

Enabling Industry Service Ecosystem

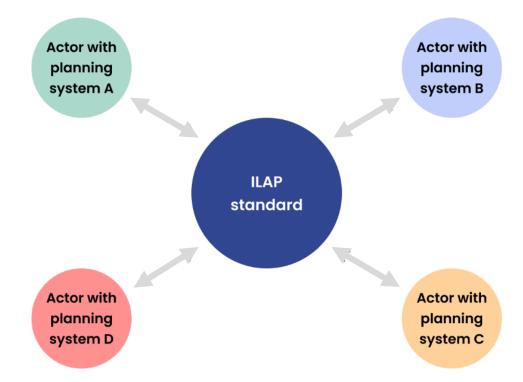


# THE ILAP CONCEPT INTEGRATED LIFECYCLE ASSET PLANNING





Interoperable and seamless flow of schedule data between collaborating parties irrelevant of planning systems being used



#### **BACKGROUND**

#### $\underline{\textbf{I}} \texttt{NTEGRATED} \ \underline{\textbf{L}} \texttt{IFECYCLE} \ \underline{\textbf{A}} \texttt{SSET} \ \underline{\textbf{P}} \texttt{LANNING}$





## Monthly reporting from contractor in investment projects:

- 600+ pages .pdf
- 15 20 000 activities
- 20+ different files

#### Schedule example: One project - One contractor - One month

Main Category	Description	Baseline Early Start	Baseline Early Finish	Faulu Stant	Early	Current Planned Baseline QTY Current QTY Progress Actual % (CSH) (RSH)	Expended Comm.	Aug Dec Apr Aug D	2019   2020 Dec Apr Aug Dec Apr 0 03.02 14.06 23.10 02.03
A A	Milestones	01.Jun.2018		01.Jun.2018		_ ^			
AB	Internal Milestone	01.Jun.2018	30.Sep.2018		-	Name	Status	Date modified	Туре
ABIM51C1	Construction scope related to demolition of vent		31.May.2018	01.5mm.2018	31.May.2018	1.1.3 PS Detail Eng PerDisciplin_BL	0	02.05.2018 11:55	Adobe Acrobat Document
1222701	lines in columns, existing area C10, C20, C30	013422010	511129.2010	013412010	J1.3.29.2010	▶ BAR-EPC_Detail Method and Work Descr	0	02.05.2018 11:47	Adobe Acrobat Document
ABIM16C2	& C40 to be completed.  Construction scope related to Riser Guide	01.Jul.2018	30.Jun.2018	01.Jul.2018	30.Jun.2018	BAR-EPC_Detailed Network Schedule		02.05.2018 11:48	Adobe Acrobat Document
	supports completed.					Hist-EPC-M-Total BL Constr_Disc	<ul><li>⊙</li></ul>	02.05.2018 11:48	Adobe Acrobat Document
ABIM52C1A	Construction scope related to structural reinforcement below main deck, existing area	01.Aug.2018	31.Jul.2018	01.Aug.2018	31.Jul.2018	Hist-EPC-M-Total BL Eng_Disc	0	02.05.2018 11:48	Adobe Acrobat Document
	C10, C20, C30 & C40 and tubular chords to be					Hist-EPC-M-Total BL Main Cat	٥	02.05.2018 11:48	Adobe Acrobat Document
ABIM50C1	completed  Construction scope related to columns and	15.Aug.2018	14.Aug.2018	15.Aug.2018	14.Aug.2018	Hist-EPC-M-Total BL Product	٥	02.05.2018 11:48	Adobe Acrobat Document
ABBIDOCI	pontoons to be complete installed	15.Aug.2016	14.Aug.2016	13.Aug.2016	14.Aug.2016	Hist-EPC-M-Total BL WBS  Hist-EPC-M-Total BL  Hist-EPC-M-Total BL	0	02.05.2018 11:48	Adobe Acrobat Document  Adobe Acrobat Document
ABIM53C1	All surface treatment under main deck to be completed	01.Sep.2018	31.Aug.2018	01.Sep.2018	31.Aug.2018	Hist-EPC-M-Total BL  Hist-EPC-M-WD activites-BL	0	02.05.2018 11:48	Adobe Acrobat Document  Adobe Acrobat Document
ABIM16C1	Construction scope to be completed prior to	03.Sep.2018	31.Aug.2018	03.Sep.2018	31.Aug.2018	PS M Constr. Baseline EPC Installation	0	02.05.2018 11:48	Adobe Acrobat Document
1	Heavy lift of upper Derick	-		-	-	PS M Constr. Baseline EPC Prefabrication	0	02.05.2018 11:48	Adobe Acrobat Document
ABIM52C1B	Construction scope related to structural reinforcement above main deck, existing area C10, C20, C30 & C40 and tubular chords to be	01.Sep.2018	31.Aug.2018	01.Oct.2018	30.Sep.2018	PS M Constr. Baseline EPC Pre-Installation		02.05.2018 11:47	Adobe Acrobat Document
						PS-Baseline-Metode og Fab-eng-Discipline(W) EPC	0	02.05.2018 11:55	Adobe Acrobat Document
ABIM50C2	completed  Construction scope related to piping and	01.Oct.2018	30.Sep.2018	01.Oct.2018	30.Sep.2018	PS-EPC-M-Bauge total WBS BL	0	02.05.2018 11:48	Adobe Acrobat Document
, and the contract of the cont	structural in area between El 30.500-32.000 to	01.00.2016	30.0ep.2010	01.00.2010	30.34p.2015	PS-EPC-M-Fenja total WBS BL	0	02.05.2018 11:48	Adobe Acrobat Document
F	be complete installed	15 4 2010	20.5 2010	17 4 2010	15.0 - 2010	PS-EPC-M-Future HUB total WBS BL	0	02.05.2018 11:47	Adobe Acrobat Document
FZ.	MC-Mechanical Completion	_	-	17.Apr.2018		PS-EPC-M-NJA total WBS BL	0	02.05.2018 11:48	Adobe Acrobat Document
FZ28403C02	Multidiscipline / general MC-Complete - Switchboard EH-84-0010.	15.Aug.2018 15.Aug.2018	20.Sep.2019 28.Aug.2018	17.Apr: 2018 17.Apr: 2018	23.Apr.2018	PS-EPC-M-Total BL Main Cat -Discipline	0	02.05.2018 11:48	Adobe Acrobat Document
F220403C02	Comm. Pack 8403-C02	15.Aug.2016	20.Aug.2010	17.Apr.2016	23.Aqu.2016	PS-EPC-M-Total BL	0	02.05.2018 11:48	Adobe Acrobat Document
FZ28203 C08	MC-Complete - Switchboard EH-82-0010. Comm. Pack 8203-C08	01.Oct.2018	19.Oct.2018	17.Apr.2018	23.Apr.2018	PS-EPC-M-Total Client-WBS Komp_form_BL	0	02.05.2018 11:48	Adobe Acrobat Document
FZ27602C06	MC Complete - Remove MOB boat No 2 -			17.Oct.2018	30.Oct.2018	PS-EPC-M-Total Product BL	0	02.05.2018 11:48	Adobe Acrobat Document
	Comm. Pack 7602-C06					PS-EPC-M-Total WBS - Product BL	٥	02.05.2018 11:48	Adobe Acrobat Document
FZ28204C17 FZ28404C19	MC-Complete - Modification of normal lightning in M10. Comm. Pack 8204-C17	03.Dec.2018 03.Dec.2018	21.Dec.2018 21.Dec.2018	03.Dec.2018 03.Dec.2018	21.Dec.2018 21.Dec.2018	PS-EPC-M-Total WBS BL	۵	02.05.2018 11:48	Adobe Acrobat Document
FZ25501C03	MC-Complete - Modification of Emergency lightning in M10. Comm. Pack 8404-C19 MC Complete - Remove Install piping Comm.	03.Dec.2018	21.Dec.2018	03.Dec.2018 04.Dec.2018	17.Dec.2018	0,1 0,1	0,0 8404-C19 0.0 5501-C03		
FZ27001C03	MC Complete - Remove Install piping Comm. Pack 5501-C03 MC Complete - Fire Area C8104: Hydraulic	01.Mar.2019	21.Mar.2019	01.Mar.2019	21.Mar.2019	0.1 0.1	0,0 3301-C03 0,0 7001-C22		
122/00/022	Start Unit Main Generators. Comm. Pack 7001-C22	013422.2019	21.344.2019	011426.2019	21.344.2015	0,1	0,0 7001-0.22		
FZ25701C01	MC Complete - Tie-In to closed drain flash drum. Comm. Pack 5701-C01	01.Mar.2019	21.Mar.2019	01.Mar 2019	21.Mar.2019	0,1	0,0 5701-001		₽
FZ28801C02	MC-Complete - Earting system Comm. Pack 8801-C02			02.May.2019	15.May.201	Page:	0,0 8801-C02		а
FZ24202C02	MC Complete - Dechlorination (sodium bisulphite) Package. Comm. Pack 4202-C02	01.Oct.2018	19.Oct.2018	13.May.2019	05.Jun.201		0,0 4202-C02		
FZ25601C05	MC Complete - Hazardous open drain from Chemical spill. Comm Pack 5601-C05	20.May:2019	12.Jun.2019	23.May.2019	17.Jun.201	1 of 633	0,0 5601-C05		₽
FZ27001C16	MC Complete - Fire Area C8105: SCDS Pump Unit. Comm. Pack 7001-C16	03.Jun.2019	24.Jun.2019	03.Jun.2019	24.Jun.2019	1 01 033	0,0 7001-C16		H .
FZ20404C04	MC-Complete - Monorails And Lifting logs Area COO. Comm. Pack 0404-CO4	20.4 2015	***	07.Aug.2019	20.Aug.2019		0,0 0404-C04		
FZ24302C03	MC-Complete - Remove / Reinstal Relief Headers. Comm Pack 4302-C03	20.Aug 2019	02.Sep.2019	20.Aug.2019	02.Sep.2019	0,1	0,0 4302-C03		H   H
Early Dates Milestone Summary Baseline									
BAR-EPC_Detailed Network Schedule Page: 1 of 633 Printed: 02.05.18 10.5									

#### **EXAMPLE: ONE PROJECT MULTIPLE CONTRACTORS**

INTEGRATED LIFECYCLE ASSET PLANNING























#### Problem & Challenges

- × High cost
- × Quality risk
- × Safety risk
- × Manual punching
- × Time consuming

#### PRACTICAL USE OF ILAP IN PROJECTS

INTEGRATED LIFECYCLE ASSET PLANNING





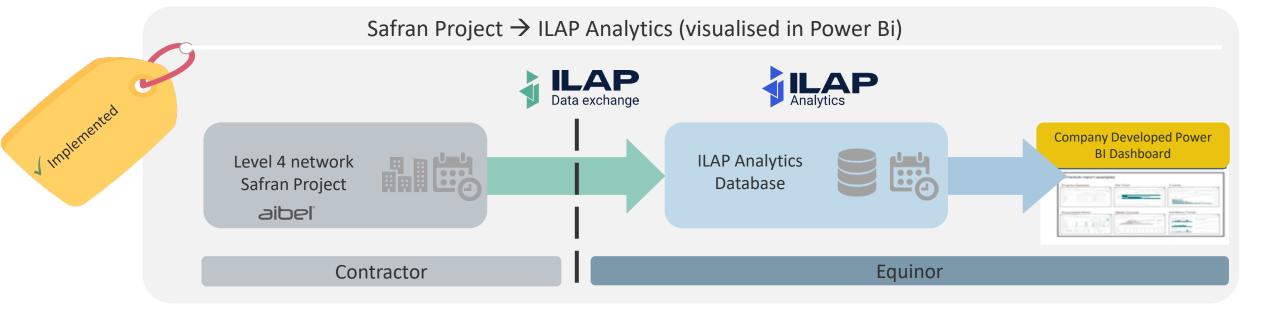
#### **ILAP Data Exchange (IDE)**

A service that enables scheduled transfers of planning data between actors and across different scheduling systems.



#### **ILAP Analytics**

Storage of schedule data, across projects and across the timeline of each single project



#### ILAP HISTORY AND STATUS OVERVIEW

√ Pilot projects

√ ISO standard

ISO

INTEGRATED LIFECYCLE ASSET PLANNING

2012: ILAP initiated

AkerBP ConocoPhillips

vår energi





+10 years of industry collaboration and continuous improvement

aibeli



*Early* **2010's** 



### THANK YOU

INTEROPERABILITY ACROSS SECTORS

23.10.2024

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Chair ILAP Steering Committee, Offshore Norge