



Would LBMS be applicable to offshore wind construction

Contribution 121

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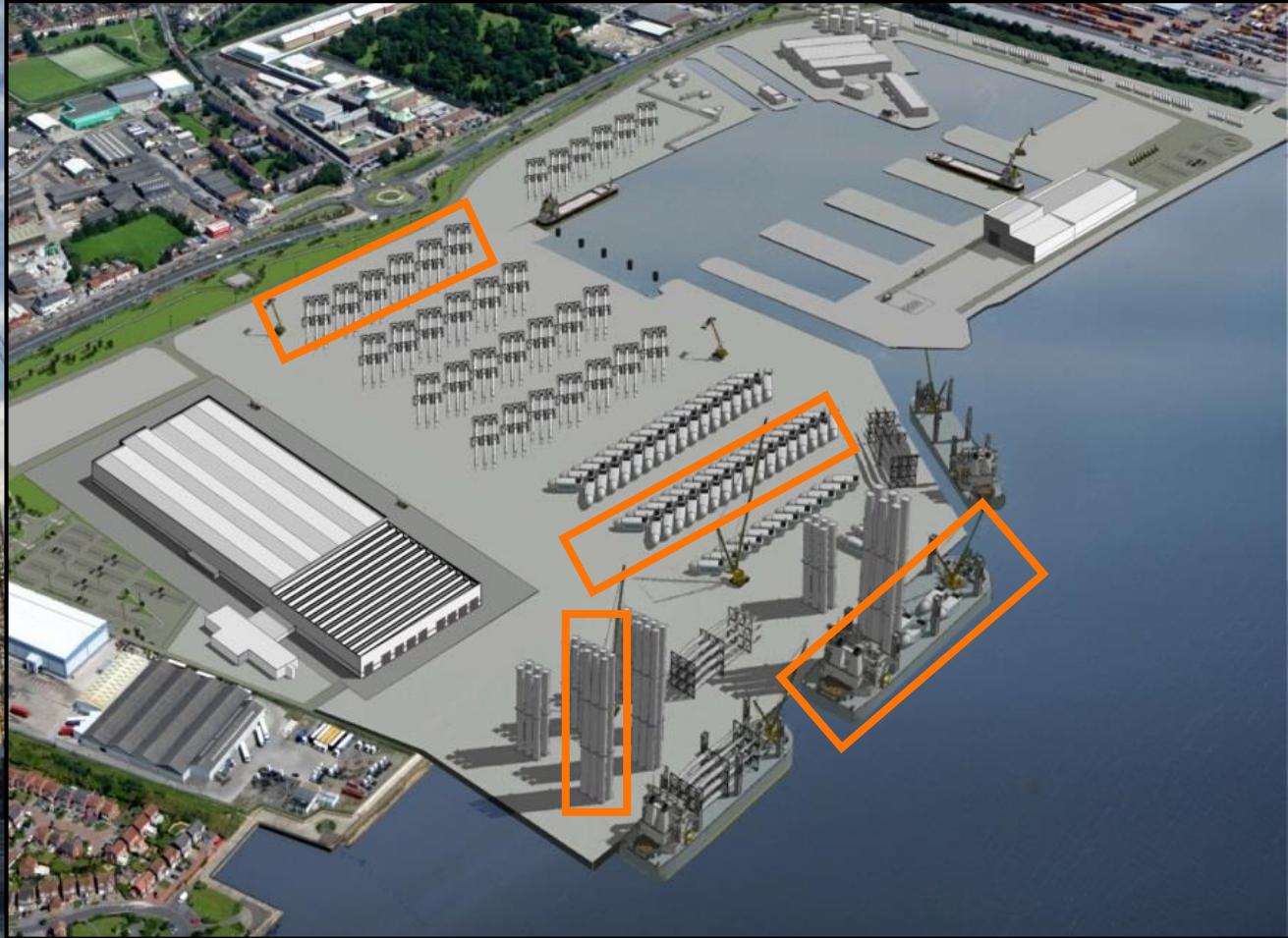
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Pre-assembly Locations



Geographic segregation
Divided by main components
and activities
Locations highlighted



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Offshore Locations



Turbine are the Offshore locations

Transferable potentials

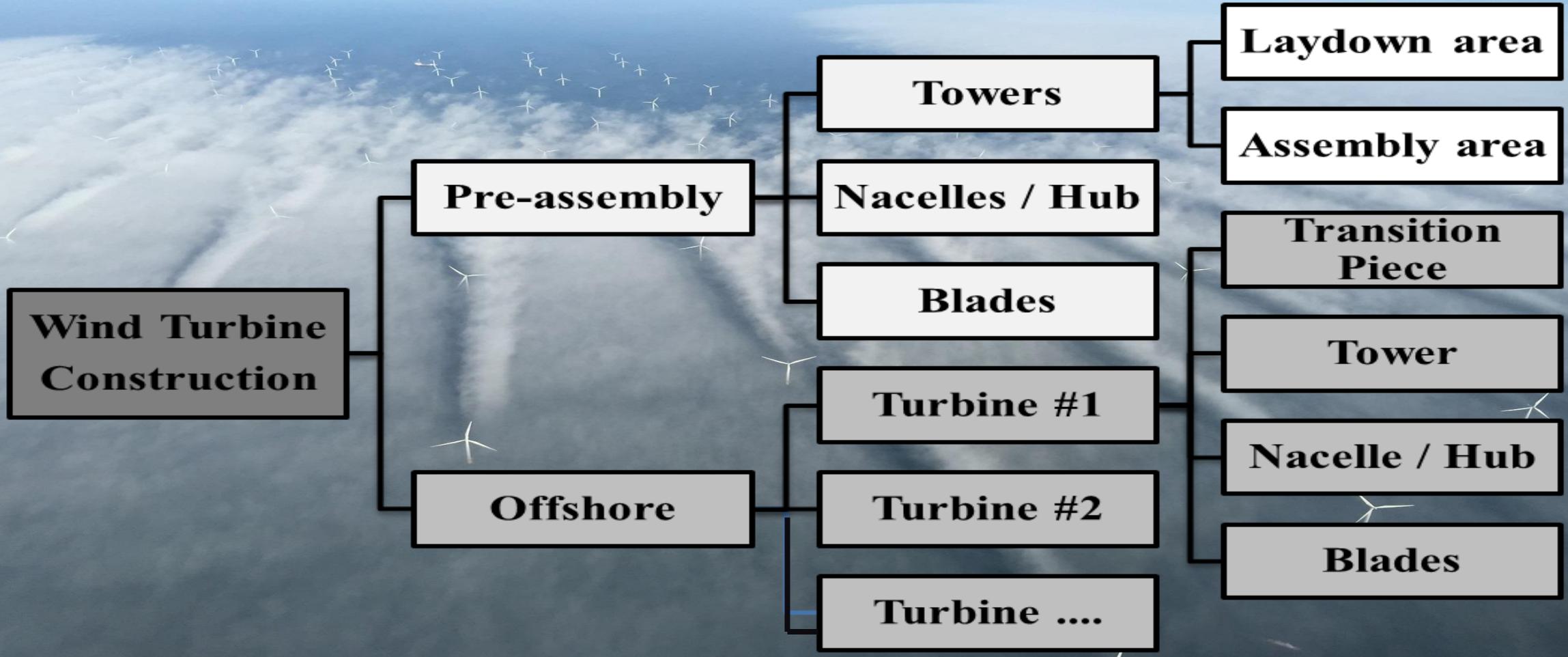
- Substations
- Cabling



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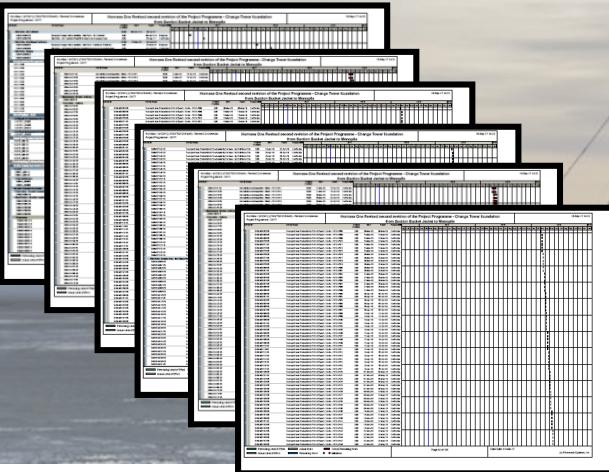
Location Structure



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CPM method

- No defined locations
- Technical dependencies
- More than 4000 activity lines between construction start / take over



Pre-assembly start

Pre-Assembly (Separate Steps) - WTG			
555MD_000330	Pre-Assembly (Overall Summary) - WTG	235,00	27-Jul-15 - 24-Jul-19
555MD_300775	NOTIFY EMPLOYER OF PLANNED DELIVERY TO PRE-ASSEMBLY H	0,00	27-Jul-15
555MD_300825	Employers Pre-Payment/Pre-Assembly Period (Load Out Period Summa	145,02	01-Mar-19 - 24-Jul-19
	Prepare Tower - WTG	233,57	01-Dec-15 - 23-Jul-19
	Prepare Bottom/Mid Tower	227,37	01-Dec-15 - 16-Jul-19
555MD_301075	Prepare Bottom/Middle Tower (Summary)	227,37	01-Dec-15 - 16-Jul-19
555MD001100	Prepare Bottom/Mid Tower (Incl. TMD and SU PL) - WTG #001	20,00	01-Dec-15 - 21-Dec-15
555MD002100	Prepare Bottom/Mid Tower (Incl. TMD and SU PL) - WTG #002	20,00	01-Dec-15 - 21-Dec-15
555MD003100	Prepare Bottom/Mid Tower (Incl. TMD and SU PL) - WTG #003	20,00	01-Dec-15 - 21-Dec-15
555MD004100	Prepare Bottom/Mid Tower (Incl. TMD and SU PL) - WTG #004	20,00	01-Dec-15 - 21-Dec-15
555MD005100	Prepare Bottom/Mid Tower (Incl. TMD and SU PL) - WTG #005	20,00	01-Dec-15 - 21-Dec-15
555MD006100	Prepare Bottom/Mid Tower (Incl. TMD and SU PL) - WTG #006	20,00	01-Dec-15 - 21-Dec-15
555MD007100	Prepare Bottom/Mid Tower (Incl. TMD and SU PL) - WTG #007	20,00	01-Dec-15 - 21-Dec-15
555MD008100	Prepare Bottom/Mid Tower (Incl. TMD and SU PL) - WTG #008	20,00	01-Dec-15 - 21-Dec-15
555MD009100	Prepare Bottom/Mid Tower (Incl. TMD and SU PL) - WTG #009	20,00	21-Dec-15 - 10-Jan-19
555MD010100	Prepare Bottom/Mid Tower (Incl. TMD and SU PL) - WTG #010	20,00	21-Dec-15 - 10-Jan-19

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Customer take over

Customer Acceptance (Summary)			
555MD_176200	Last WTG Accepted	0,00	17-Aug-19
	Notice to Engineer for Taking-Over Certificate	140,00	10-Mar-19 - 03-Aug-19
555MD_000380	Notice to Engineer for Taking-Over Certificate - (WBS Summary)	140,00	10-Mar-19 - 03-Aug-19
555MD_001380	Notice to Engineer for Taking-Over Certificate - WTG #001	0,00	10-Mar-19
555MD_002380	Notice to Engineer for Taking-Over Certificate - WTG #002	0,00	11-Mar-19
555MD_003380	Notice to Engineer for Taking-Over Certificate - WTG #003	0,00	12-Mar-19
555MD_004380	Notice to Engineer for Taking-Over Certificate - WTG #004	0,00	13-Mar-19
555MD_005380	Notice to Engineer for Taking-Over Certificate - WTG #005	0,00	14-Mar-19
555MD_006380	Notice to Engineer for Taking-Over Certificate - WTG #006	0,00	11-Mar-19
555MD_007380	Notice to Engineer for Taking-Over Certificate - WTG #007	0,00	12-Mar-19

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Logical layers



1. External logical relationships between activities within locations.
2. External higher-level logical relationships between activities driven by different levels of accuracy.
3. Internal logic between activities within tasks.
4. Phased hybrid logic between tasks in related locations.
5. Standard CPM links between any tasks and different locations.



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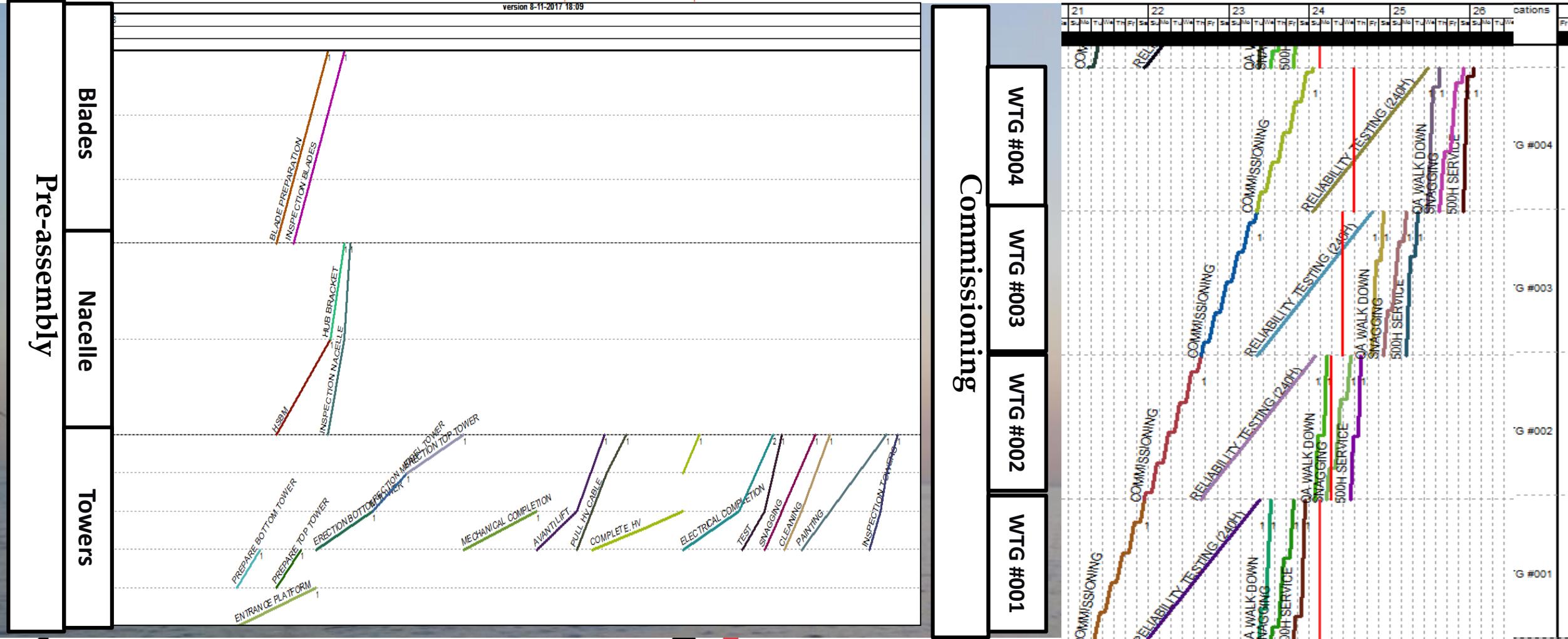


Example



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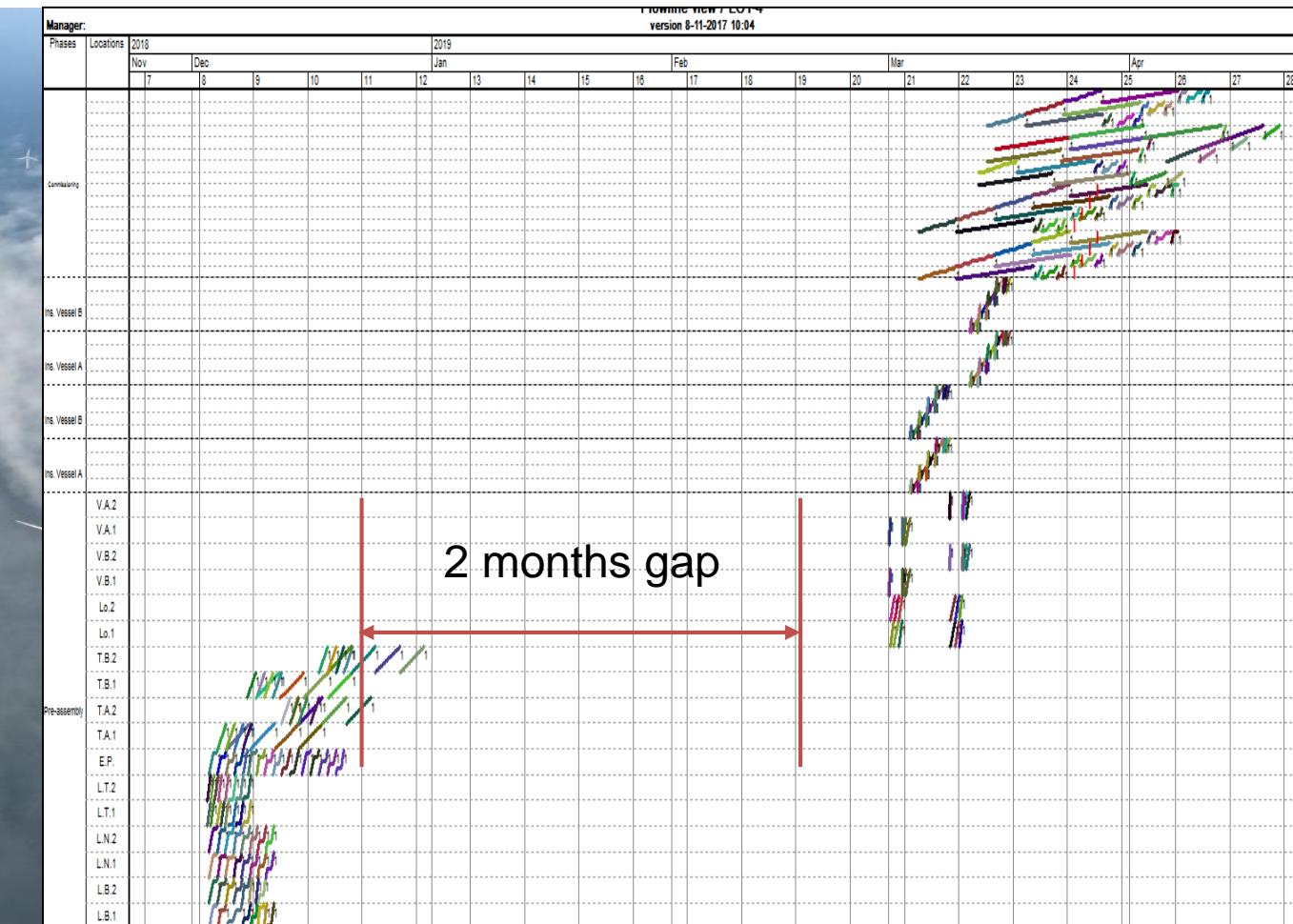
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Flowline



Overview of 16 turbines
CPM buffer gap visible
Pre-assembly and offshore separated
locations



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BACK UP SLIDES

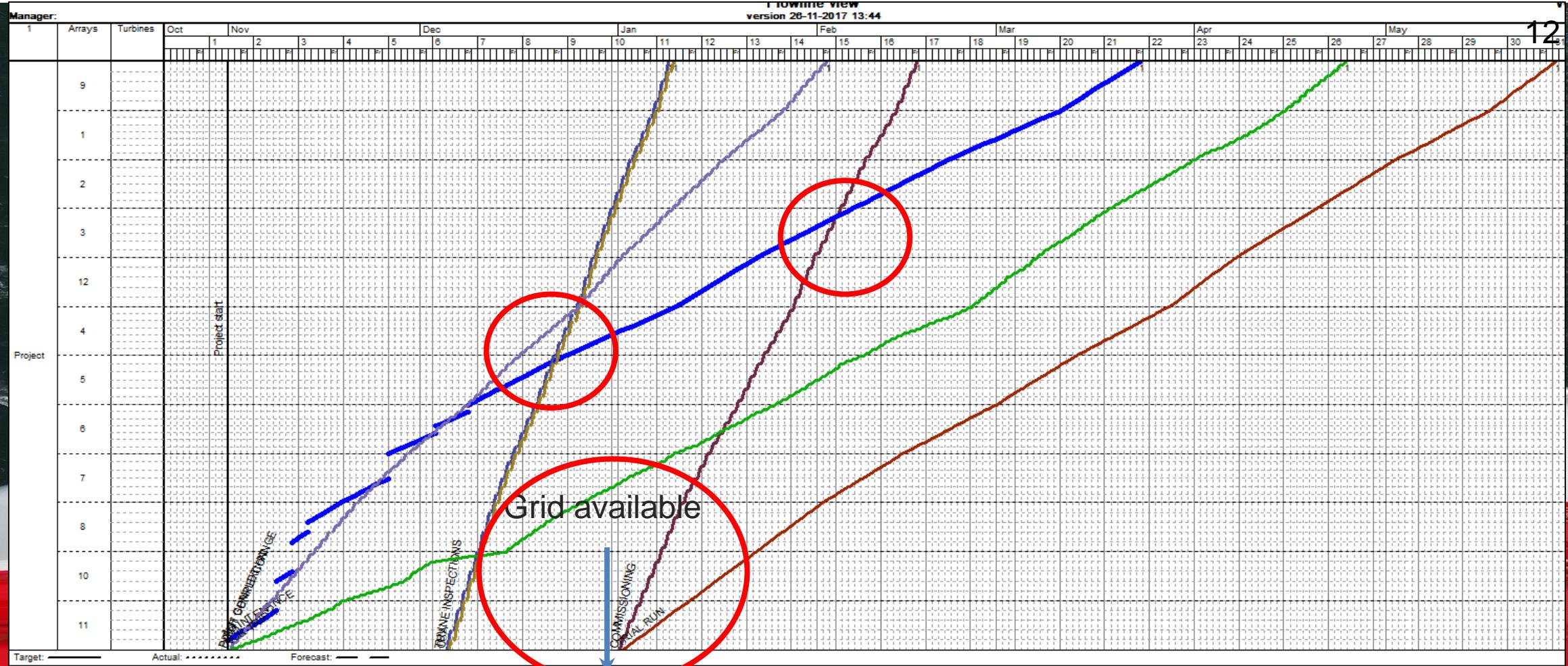
Literature List

Source

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Domain Manufacturing Construction	OF wind	CPM	LBMS	LPS
x	x	x		
x	x	x	x	x
x	x	x	x	
x	x	x	x	
x	x	x	x	x
x	x	x	x	
x	x	x	x	x
x	x	x	x	x
x	x	x	x	x
x	x	x	x	
x	x	x	x	
x	x	x	x	
x	x	x	x	

Current Overview



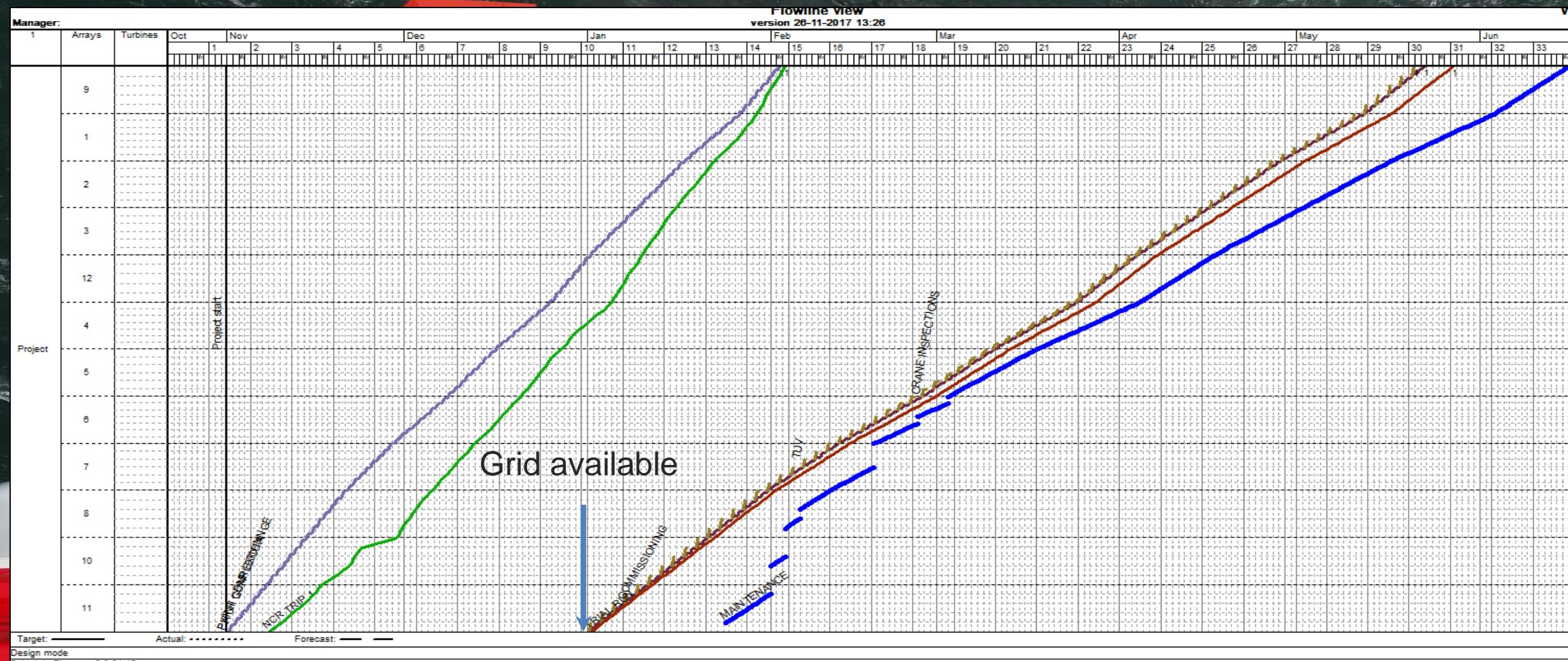
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Optimized View



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Resource Consumption

