The Predictability Planning Framework by Day1

Brief Introduction

1. “Name my price” story (the first one). The tremendous opportunity framing your data within The Vital 4^{tm} offers.
2. 99.5% of projects do not have this framework. They deal in schedule dates and logic, not the fundamentals behind it.
3. This framework is the foundation of everything else you do. Big CPM schedules, variances, risk profiles, AI? Start here first.
4. What is predictability? It isn’t good or bad. You could have a very predictable bad outcome as easily as a predictable good outcome. The key advantage to predictability is decision making clarity.
5. Criticality is no longer a logical path but is viewed through the lens of progress and production.
6. There are layers to this framework. You can have tremendous success influencing a project with just one progress curve and one data table. The key is to look at the data through the predictability framework.
7. Who am I: Travis Arlitt, Co-Founder and CPO of Day1. Expert sought after capital project planner. Tens of billions of and climbing of projects where I was the lead planner, tens of millions of direct work hours. I’ve seen it all.
8. Who is Day1 and what services are embedded in our DNA:
    1. The Vital 4^{tm} Rapid Assessment on your current reporting, using Day1Model as the processor. Converting your project into a series of tornado charts by criticality on base case and what-if scenarios, while flagging any plan compression.
    2. We implement this and conduct on site and corporate training certifying your internal team on the Day1 methodology:
        1. For management consultancies this gives you a competitive foot in the door and exposes the need for more work.
        2. For Owner teams this helps see around the spin coming at you from all angles.
        3. For EPCs you get a huge benefit of project go forward clarity which underpins your overall project strategy.

The Predictability Planning Framework by Day1

Upon Course Completion You Will:

1. Be in possession of a framework for project clarity. Clarity that enables:
    a. Project saving decisions months and sometimes years before backward plan variances and large CPM schedule variances and floaty critical paths prompt urgency. $50 million in avoided costs is not uncommon.
    b. Ease of system audit. No more black boxes. Predictability thrives on transparency and simplicity.
    c. Adaptability and flexibility in front of the status date. I'll show you how to cut weeks out of a re-baseline if all you have is P6 to work with. Day1's heartbeat is flexibility in front of the status date. It's why we exist.
    d. A framework that allows easy swapping of variables such as scope and performance trends as well as calendar related possibilities.
    e. Knowledge of how to create a progress system that is designed for assurance and transparency.
2. IF you want to, not necessary, you can free up a massive amount of effort by letting the large CPM schedule fade into the background and divert that energy into this framework. On every project I've planned (excepting 1) this has replaced our standard large P6 schedule within 6 months or less.
    a. The clear production spreads and bow wave management are all the teams need along with:
    b. A clear summary schedule indicating long lead equipment, other external drivers and the key milestones and unit info.
    c. Always ask the hard questions. Are the field coordinators and superintendents asking the CPM schedule if they should put up steel once the foundation is poured? Generally, not. Is the director or PM concerned with the detailed activities and use these for their decision-making basis? Generally, not as well. They are concerned with progress to milestones.

The Predictability Planning Framework by Day1

Course Structure.

We will review each of the predictability planning steps in detail with a basic oil refinery as the real-world case:

1. Step 1: Discrete Work Breakdown Structure. How the work will flow.
2. Step 2: The key milestones that drive the blocks of work in Step 1.
3. Step 3: How to create a robust measure and monitoring system.
4. Step 4: Combining the first 3 steps into an understandable and cohesive system/progressing the system.
5. Step 5: What-if scenario generation. The foundational 2 what-ifs.

Thought Process Deep Dive.

Closing out I will verbally discuss each of the following project types within the predictability planning framework:

1. Oil and Gas Onshore – Well Pad Project
2. Oil and Gas Offshore - Tension Leg Platform
3. Oil and Gas – LNG Module Yard
4. Oil and Gas – LNG Onshore Facility
5. Infrastructure – Road and Bridge
6. Infrastructure – Sector Gate Dam
7. Infrastructure - T Wall Levee
8. Data Center
9. Mining Project
10. Industrial Project Completions
11. FEED for Industrial Facility
12. Detailed Design for Industrial Facility

Steps 1-5 Overview

Theoretical Walk Through of the Steps Prior to Project-by-Project Cycle Through

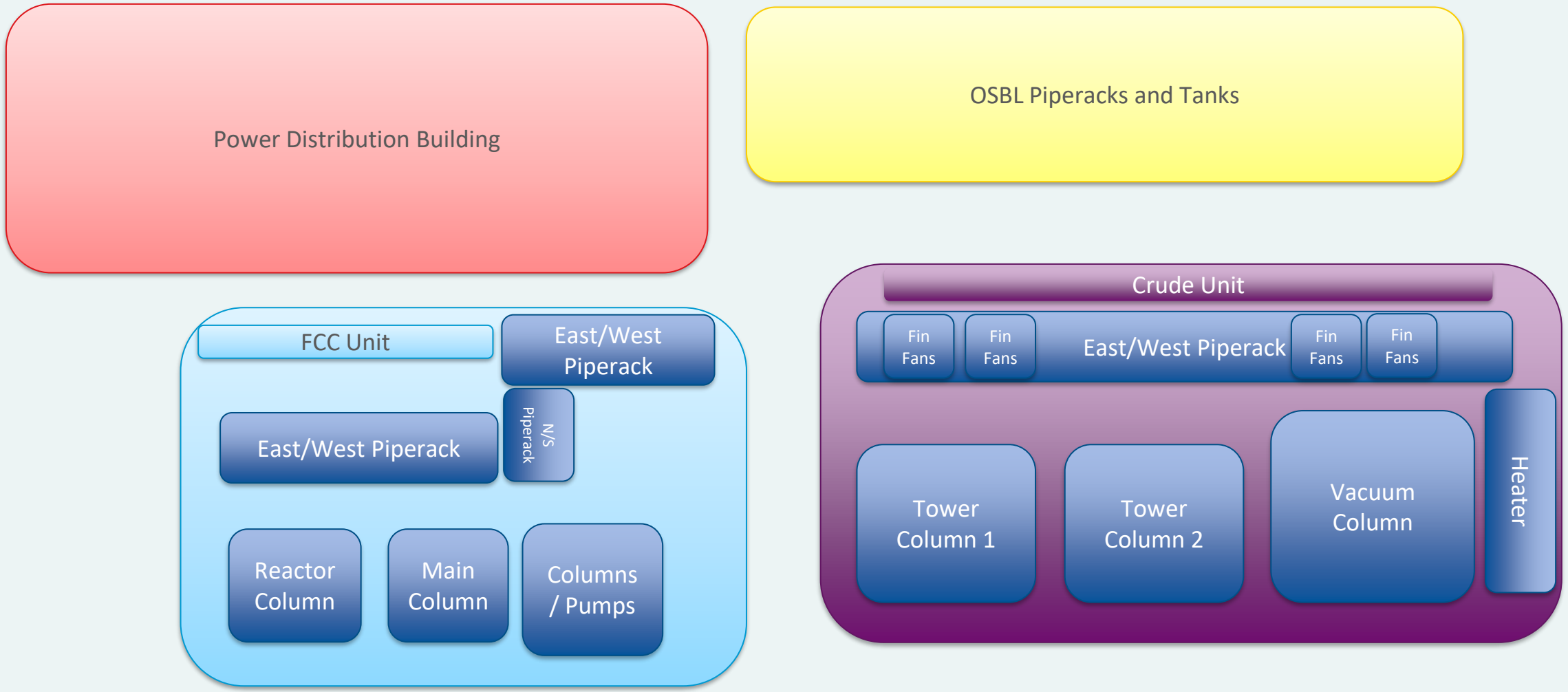
The Predictability Planning Framework by Day1

Step 1 Overview - Discrete Work Breakdown Structure. How the work will flow.

1. The key concept is to divide the work into major areas that have no planned work separation. They flow from start to finish.
2. If an area would be considered a singular unit but have 2 distinct phases, treat each phase as a separate area for predictability.
3. This is not common and the normal WBS will take care of 95% of what you need but workflows must be planned in the same block of time.
    a. An example might be a long piperack. While the foundations are part of the piperack it might be split into 2 phases to clear out the civil crews to get steel erected, then come back and finish the rack foundations.
4. Within these groups you have a discipline workflow (WBS) that must be planned for to support the area completion date. These have a start stagger and a finish stagger that is readily understood.
    a. Start Stagger Example: Earthwork starts then 3 weeks later piles can start, 4 weeks after piles foundations can follow, then 6 weeks to steel, etc. through to the last discipline which is typically E&I.
    b. Finish Stagger Example: Concrete can complete 2 months after pile driving demobs, then steel 6 weeks later, then your pipe
5. A standard set of staggers can be used for most of the project within the discipline WBS.
6. I like to think of this as where a crew is assigned for a period of time and they wouldn't jump around day to day or week to week until that area is completed.
7. These are driven off the project milestones. A relatively small group of milestones can generate dates for an entire project. The primary benefit is these flows are understandable to the entire team.

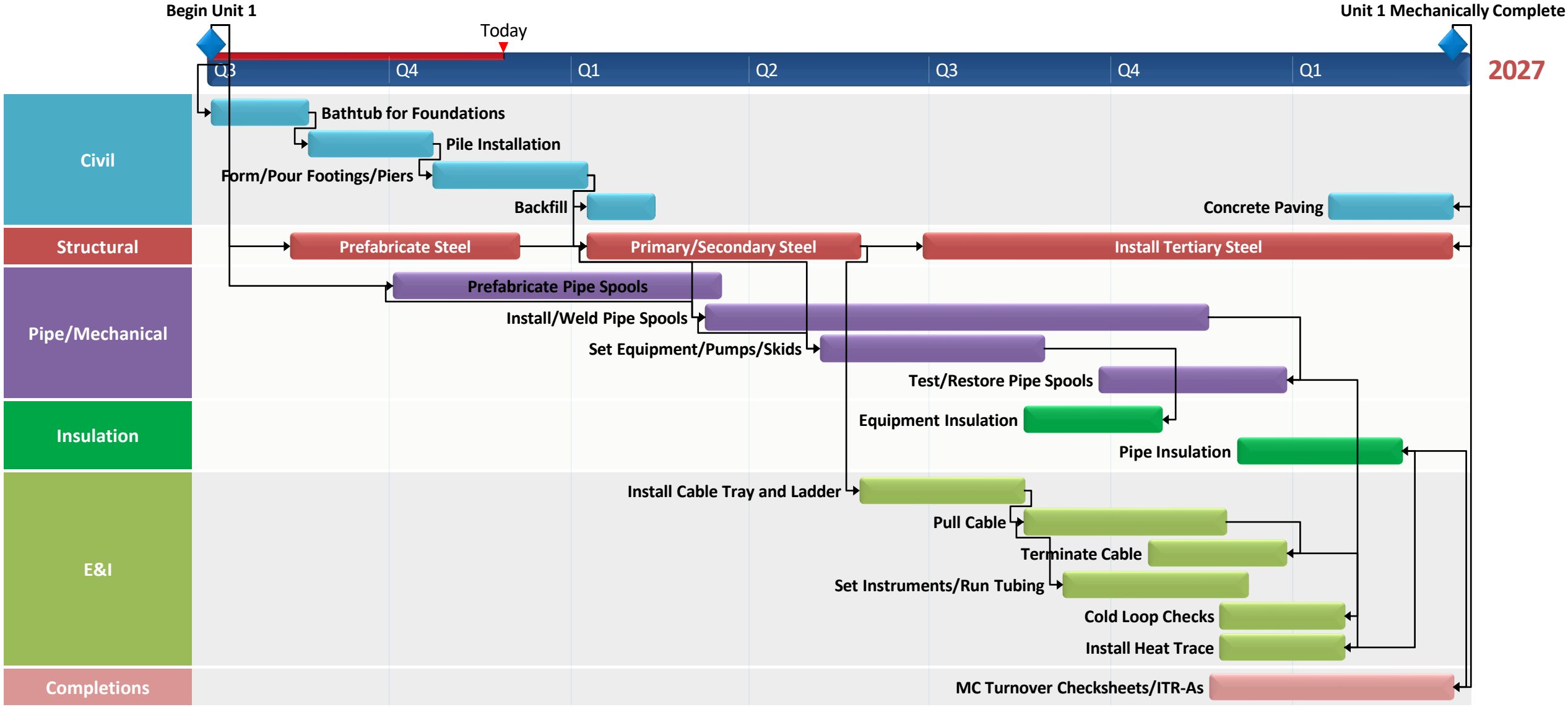
The Predictability Planning Framework by Day1

Step 1A: Geographic Area WBS



DAY1

Step 1B: Discipline WBS

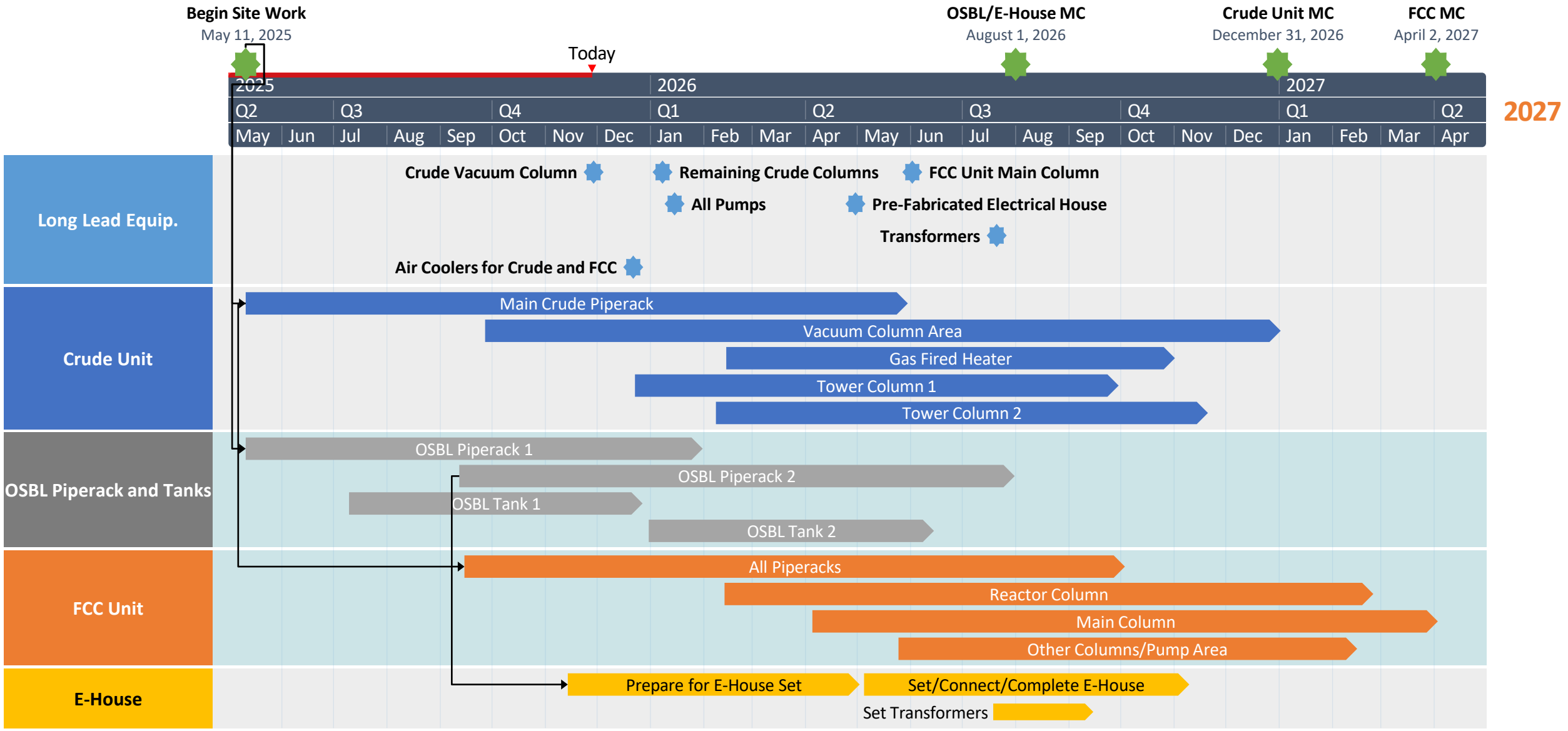


DAY1

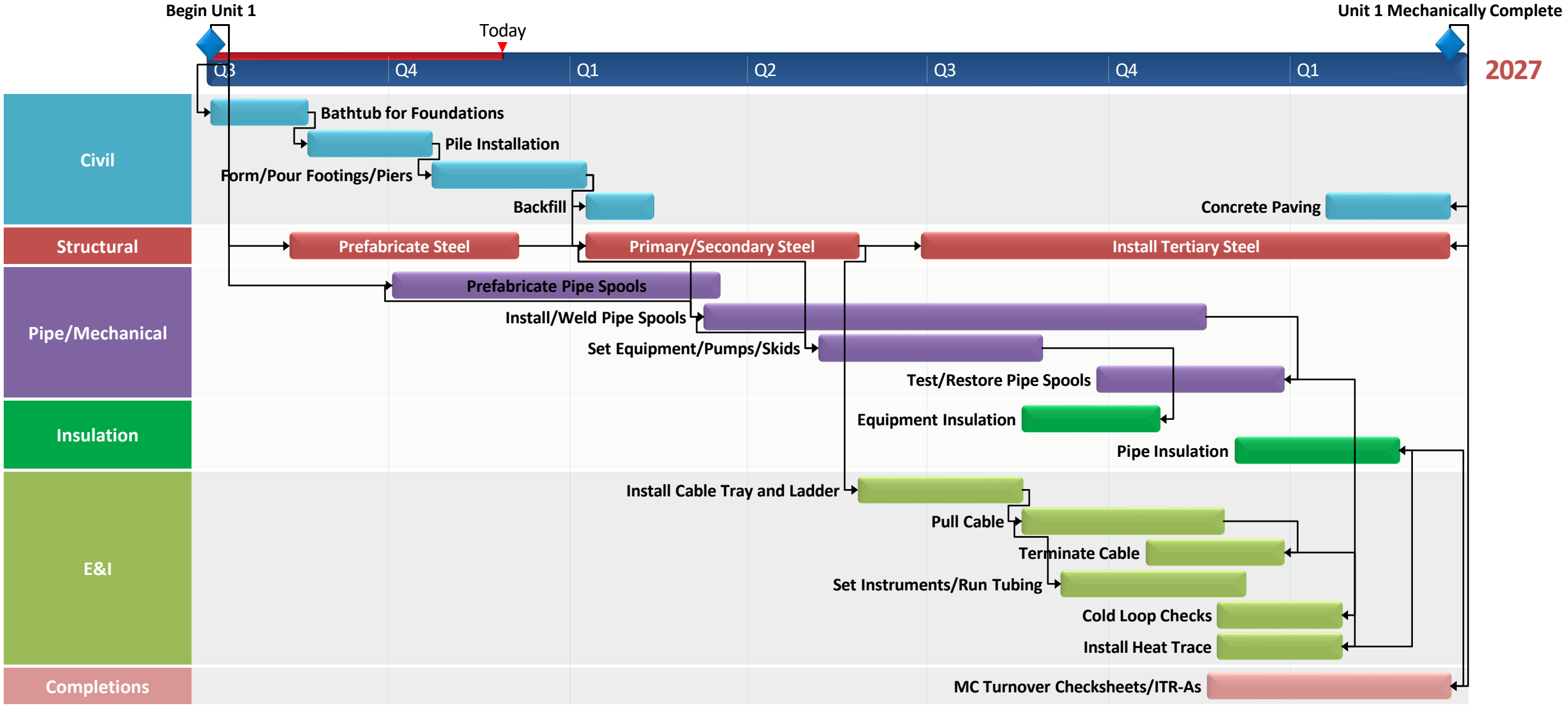
The Predictability Planning Framework by Day1

Step 2 Overview - The key milestones that drive the blocks of work in Step 1.

1. A project is generally given its final investment decision (FID) based on a series of dates. These are the dates that drive everything else.
2. The major work areas must start and finish within a standard framework to make the project a success. It's the job of the predictability planner to sit the team down and hash these out. This is infinitely easier and more fruitful than a multi-day CPM workshop or schedule review, 20X the ROE, return on effort. You need to leave this session with:
    a. The start and finish dates for each major work area to support the plan date or dates for a phased approach.
    b. Long Lead Equipment delivery required on site (ROS) dates to support the above dates. I generally arrive at these by asking the construction director/manager how long before the completion of Unit X does this piece of equipment need to be installed? How early can you set it? Do we have a place to warehouse it if it arrives early? Is there any structural steel that needs to be held out prior to placement. This gets you a solid range. You can and will continue to dial this in.
    c. The general mobilization dates for each major discipline/contractor to support the dates.
    d. Within these dates you now get start/finish dates for each major scope of work. The industry you are in has a very specific range and rules of thumb that all in this meeting will have in their pockets. Pile, then concrete, then steel, pipe/mechanical, buildings, etc. There is a flow you need to nail down.
3. Once (a. thru d.) above are worked out you can put (a.) and (b.) into a one page plan or plot. Item (c.) can be milestones and item (d.) can be part of your progress system, what I usually do, or in a more detailed schedule if the team requires.


Begin Site Work
May 11, 2025
Today
OSBL/E-House MC
August 1, 2026
Crude Unit MC
December 31, 2026
FCC MC
April 2, 2027
2025
2026
2027
Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2
May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr
2027
Long Lead Equip.
Crude Vacuum Column
Remaining Crude Columns
FCC Unit Main Column
All Pumps
Pre-Fabricated Electrical House
Transformers
Air Coolers for Crude and FCC
Crude Unit
Main Crude Piperack
Vacuum Column Area
Gas Fired Heater
Tower Column 1
Tower Column 2
OSBL Piperack and Tanks
OSBL Piperack 1
OSBL Piperack 2
OSBL Tank 1
OSBL Tank 2
FCC Unit
All Piperacks
Reactor Column
Main Column
Other Columns/Pump Area
E-House
Prepare for E-House Set
Set/Connect/Complete E-House
Set Transformers

Step 1B: Discipline WBS (for Reference to slide #9)



DAY1

The Predictability Planning Framework by Day1

Step 3 Overview - How to create a robust measure and monitoring system.

1. Now we are getting to the fun part. The part I've *never* seen done correctly. Contractors say they have a wonderful progress system but trying to get useful answers out of it is usually like a tooth pull from 1950. Even if you have a good system from one contractor the whole project system won't talk with it. So how do we get it all talking together outside of a proprietary system?
2. The basis is a standard set of high-level unit rates. Remember, we are not estimating a project which could be hundreds of thousands of nuts, bolts, etc. We want to know the progress pulse and for that it needs to be at the major component level.
3. You need to use consistent unit rates across contractors. Otherwise, the earning will not match up.
4. You don't need exact unit rates for your area. I just keep about 45-unit rates in my pocket that does almost anything. I'll share these as the course goes on. If you come up with say 4,000,000 direct hours and the consensus is they want it to be 6,000,000 then simply ratio it all up 50%. Don't die on that hill.
5. The hill to die on (metaphorically). The reason we use unit rates is to allocate effort is to arrive at a fairly proportional progress system. You don't want to earn 50% of the work when only 25% of the effort has been spent. If a stakeholder wants you to load up their work with more weightage you should push back unless the entire team has a reason for the exception.
6. As these are larger pieces of the job, they most likely will take weeks or even months to go from first progress to complete. This is where earning rules of credit come in. They should keep progress more or less in line with reality on a week-to-week basis. The *massive* danger here is not incentivizing completions. If not, you will hit 95% complete and stall out for months.
7. Drones or VR headset progress systems could help with population but there are big gaps that must be filled in. Steel might look done but isn't rattled up, pipe looks great but isn't welded (show pipe), cable will have to use cable schedule, sign offs, etc.
8. I've been a planner for a government EVMS project. Using dollars for plan progress is utterly nonsensical. You will be running the other way from predictability. Always keep an hour-based system, even if it's just for the purpose of predictability.

The Predictability Planning Framework by Day1

Unit Rates and Rules of Credit-Pg1

Discipline	Unit Rate ID	Direct Hours per Unit	Units	Adder Desc.	Adder Rate	Units	Rule of Credit-1	Rule of Credit-2	Rule of Credit-3	Rule of Credit-4	Rule of Credit-5	Rule of Credit-6	Source
Civil-Earthwork	Remove Topsoil	0.25	SY				Removed (100%)						Civil Drawings
Civil-Earthwork	Earthwork Cut	0.25	CY				Cut (100%)						Civil Drawings
Civil-Earthwork	Earthwork Fill	0.25	CY				Fill/Compact (100%)						Civil Drawings
Civil-Piling	Pile Installation	25	EA				Pile at Site (5%)	Pile Install (60%)	Pile Cut (10%)	Pile Cap (25%)			Civil Drawings
Civil-Concrete	Monolithic Pours	15	CY				Rebar / Embeds (50%)	Form (20%)	Pour (20%)	Strip (10%)			Civil Drawings
Civil-Concrete	Spread Footings	25	CY				Rebar / Embeds (50%)	Form (20%)	Pour (20%)	Strip (10%)			Civil Drawings
Civil-Concrete	Concrete Piers	50	CY				Rebar / Embeds (50%)	Form (20%)	Pour (20%)	Strip (10%)			Civil Drawings
Civil-Concrete	Concrete Paving	50	CY				Rebar / Embeds (50%)	Form (20%)	Pour (20%)	Strip (10%)			Civil Drawings
Structural Fab	Primary Structural Fab	100	Tons				Cut (20%)	Weld (40%)	Paint (20%)*	Sign Off (20%)			Piecemark List
Structural Fab	Secondary Structural Fab	175	Tons				Cut (20%)	Weld (40%)	Paint (20%)*	Sign Off (20%)			Piecemark List
Structural Fab	Tertiary Structural Fab	300	Tons				Cut (20%)	Weld (40%)	Paint (20%)*	Sign Off (20%)			Piecemark List
Structural Install	Primary Structural Install	50	Tons				Shakeout (10%)	Assemble (50%)	Align (20%)	Sign Off (20%)			Piecemark List
Structural Install	Secondary Str. Install	75	Tons				Shakeout (10%)	Assemble (50%)	Align (20%)	Sign Off (20%)			Piecemark List
Structural Install	Tertiary Structural Install	150	Tons				Shakeout (10%)	Assemble (50%)	Align (20%)	Sign Off (20%)			Piecemark List
Fireproofing	Structural Fireproofing	50	CY				Studs (20%)	Mesh (20%)	Firepoofing (60%)				Piecemark List
Fireproofing	Equipment Fireproofing	1	SF				Studs (20%)	Mesh (20%)	Firepoofing (60%)				Equipment List
Mechanical	Equipment Installation	20	Tons				Rough Set (30%)	Alignment (50%)	Sign Off (20%)				Equipment List
Pipe Fab	Pipe Prefab-Carbon	6	Dia-Inch				Cut (5%)	Weld (40%)	Paint (20%)*	Sign Off (20%)			Spool List
Pipe Fab	Pipe Prefab-Exotic	11	Dia-Inch				Cut (5%)	Weld (40%)	Paint (20%)*	Sign Off (20%)			Spool List
Pipe Fab	Pipe Prefab-Resin	5	Dia-Inch				Cut (5%)	Weld (40%)	Paint (20%)*	Sign Off (20%)			Spool List
Pipe Install	Pipe Install-Carbon	30	Spool	Welding**	0.25	Dia-Inch	Rough Position (5%)	Supported (15%)	Welded (30%)	Tested (20%)	Rest. (20%)	Walk (10%)	Spool List
Pipe Install	Pipe Install-Exotic	40	Spool	Welding**	0.45	Dia-Inch	Rough Position (5%)	Supported (15%)	Welded (30%)	Tested (20%)	Rest. (20%)	Walk (10%)	Spool List
Pipe Install	Pipe Install-Resin	25	Spool	Welding**	0.15	Dia-Inch	Rough Position (5%)	Supported (15%)	Welded (30%)	Tested (20%)	Rest. (20%)	Walk (10%)	Spool List
Pipe Install	Pipe Install-Underground	50	Spool	Welding**	0.35	Dia-Inch	Rough Position (5%)	Supported (15%)	Welded (30%)	Tested (20%)	Rest. (20%)	Walk (10%)	Spool List

The Predictability Planning Framework by Day1

Unit Rates and Rules of Credit-Pg2

Discipline	Unit Rate ID	Direct Hours per Unit	Units	Adder Desc.	Adder Rate	Units	Rule of Credit-1	Rule of Credit-2	Rule of Credit-3	Rule of Credit-4	Rule of Credit-5	Rule of Credit-6	Source
Coating	Structural Coating	1	SF				Primed (50%)	Final Coat (50%)					Piecemark List
Coating	Pipe Coating	0.25	LF				Primed (50%)	Final Coat (50%)					Spool List
Insulation	Pipe Insulation	1.25	LF				Insulation (50%)	Covering (40%)	Sign Off (10%)				Spool List
Insulation	Equip Insulation	1	SF				Insulation (60%)	Covering (30%)	Sign Off (10%)				Equipment List
Insulation	Deck Insulation	2.5	SF				Insulation (60%)	Covering (30%)	Sign Off (10%)				Drawings
Electical	Power Cable Tray Install	3	LF				Tray Installed (70%)	Bonded (20%)	Signed Off (10%)				Drawings
Electical	Power Cable Pulls-HV	0.25	LF				Pull (50%)	Dress/Tag (10%)	Term 1st End (15%)	Term 2nd End (15%)	Sign Off (10%)		Cable Schedule (List)
Electical	Power Cable Pulls-MV	0.21	LF				Pull (50%)	Dress/Tag (10%)	Term 1st End (15%)	Term 2nd End (15%)	Sign Off (10%)		Cable Schedule (List)
Electical	Power Cable Pulls-LV	0.175	LF				Pull (50%)	Dress/Tag (10%)	Term 1st End (15%)	Term 2nd End (15%)	Sign Off (10%)		Cable Schedule (List)
Electical	Power Cable Pulls-Fiber	0.1	LF				Pull (50%)	Dress/Tag (10%)	Term 1st End (15%)	Term 2nd End (15%)	Sign Off (10%)		Cable Schedule (List)
Electical	Power Cable Pulls-F&G	0.1	LF				Pull (50%)	Dress/Tag (10%)	Term 1st End (15%)	Term 2nd End (15%)	Sign Off (10%)		Cable Schedule (List)
Electical	Heat Trace	0.3	LF				Install (70%)	Terminate (20%)	Sign Off (10%)				Cable Sched./Spool List
Electical	Power JB Installation	30	EA				Bolted Up (80%)	Sign Off (20%)					Elect. Equip. Schedule
Electical	Light Fixture Install	20	EA				Bolted Up (80%)	Sign Off (20%)					Light Fixture Schedule
Electical	Conduit	1	LF				Assembled (80%)	Sign Off (20%)					Drawings
Electical	Duct Bank	7	LF				Excavate/Bed (20%)	Conduit (50%)	Pour Concrete (20%)	Backfill (10%)			Drawings
Instrumentation	Inst Cable Tray Install	3	LF				Tray Installed (70%)	Bonded (20%)	Signed Off (10%)				Drawings
Instrumentation	Inst Power Cable Pulls	0.7	LF				Pull (50%)	Dress/Tag (10%)	Gland/Term (30%)	Sign Off (10%)			Cable Schedule
Instrumentation	Inst JB Installation	30	EA				Bolted Up (80%)	Sign Off (20%)					Elect. Equip. Schedule
Instrumentation	Instrument Installation	50	EA				Mount (50%)	Tubing (30%)	Calibrate (10%)	Sign Off (10%)			Instrument Index
Instrumentation	Loop Checks	5	EA				Cold Loop (50%)	Hot Loop (50%)					Completions DB
ITRs	ITR-A	6	EA				Signed off (100%)						Completions DB

*If no paint, progress through. As a rule progress through if a step is not required.
**To weight the pipe size instead of creating a tag for small/medium/large bore.

The Predictability Planning Framework by Day1

Examples of Progress System – Pipe Spool Install

Pipe Spool Core Data

UID	Primary Work Area	Secondary Work Area	Primary Quantity	Secondary Quantity	Tertiary Quantity	Sub-Quantity 1	Sub-Quantity 2	Sub-Quantity 3	Sub-Quantity 4	Sub-Quantity 5	System	Sub-System
Spool Number (UID)	Unit	Sub-Unit	Dia Inches Shop Weld	Dia Inches Field Weld	Lineal Feet	Bolt Up Connections	Field Painted Joints	Volume for Testing (cubic feet)	Primary Diameter	Heat Trace Qty	System	Sub-System
Spool 1	Crude	Vacuum	14	6	21	2	3	0.5	4	2	5	5.5
Spool 2	Crude	Vacuum	12	8	25	2	4	0.0	6		6	6.8

Pipe Installation Progress

Unit Rate ID	Unit Rate	Unit of Measure	Unit Rate Adder	Adder Rate	Primary Quantity	Budget Hours	UID	Discipline	Rollup Tag 1	Rollup Tag 2
e ID	Unit Rate	Unit of Measure	Unit Rate Adder	Adder Rate	Dia Inches Field Weld	Budget Hours	Pipe Install UID	Discipline Rollup	Contractor	Pipe Material
Pipe Install-Carbon	30	Spool	Welding	0.25	14	31.5	Vacuum - Pipe Install-Carbon	Pipe Install	Mechanical 1	Carbon Steel
Pipe Install-Carbon	40	Spool	Welding	0.45	14	43.6	Vacuum - Pipe Install-Carbon	Pipe Install	Mechanical 1	Carbon Steel

5%	15%	30%	20%	20%	10%									
Rule of Credit-1	Rule of Credit-2	Rule of Credit-3	Rule of Credit-4	Rule of Credit-5	Rule of Credit-6	Earned Hours	% Complete	Quantity Roll-Up 1		Quantity Roll-Up 2		Quantity Roll-Up 3		Sub-Quantity 1
Rough Position	Supported	Welded	Tested	Restored	Final Walk	25-Jul-24	% Complete	Equivalent Pipe	Units	Dia-Inches	Units	Tested		Tested Volume
4-Jul-24	25-Jul-24	1-Aug-24	8-Aug-24	15-Aug-24		28.35	90.0%	18.90	LF	14.00	Dia-Inches	1		0.5
4-Jul-24	25-Jul-24					8.7	20.0%	5.0	LF	0.0	Dia-Inches	0		0.0

DAY1

The Predictability Planning Framework by Day1

Examples of Progress System – Power Cable

Power Cable Core Data

	Primary Work Area	Secondary Work Area	Primary Quantity	Secondary Quantity	System	Sub-System
Spool Number (UID)	**Unit**	**Sub-Unit**	**Lineal Feet**	**Terminations**	**System**	**Sub-System**
Power Cable 1	Crude		375	8	1	1.5
Power Cable 2	Crude		250	6	2	2.5

Power Cable Progress

Unit Rate ID	Unit Rate	Unit of Measure	Primary Quantity	Budget Hours	UID	Discipline	Rollup Tag 1	Rollup Tag 2
Unit Rate ID	**Unit Rate**	**Unit of Measure**	**Lineal Feet**	**Budget Hours**	**Cable UID**	**Discipline Rollup**	**Contractor**	**Pipe Material**
Power Cable Pulls-MV	0.21	LF	375	78.75	Crude - Power Cable Pulls-MV	Electical	E&I 1	Carbon Steel
Power Cable Pulls-LV	0.25	LF	250	62.5	Crude - Power Cable Pulls-LV	Electical	E&I 1	Carbon Steel

50%	10%	15%	15%	10%								
Rule of Credit-1	Rule of Credit-2	Rule of Credit-3	Rule of Credit-4	Rule of Credit-5	Rule of Credit-6	Rule of Credit-7	**Earned Hours**	**% Complete**	**Quantity Roll-Up 1**		**Quantity Roll-Up 2**	
	Dress/Tag	**Term 1st End**	**Term 2nd End**	**Sign Off**			**25-Jul-24**	**% Complete**	**Equivalent Cable**	**Units**	**Terminations**	**Units**
4-Jul-24	25-Jul-24	1-Aug-24					47.3	75%	281	LF	4	EA
4-Jul-24	25-Jul-24						37.5	60%	150	LF	0	EA

DAY1

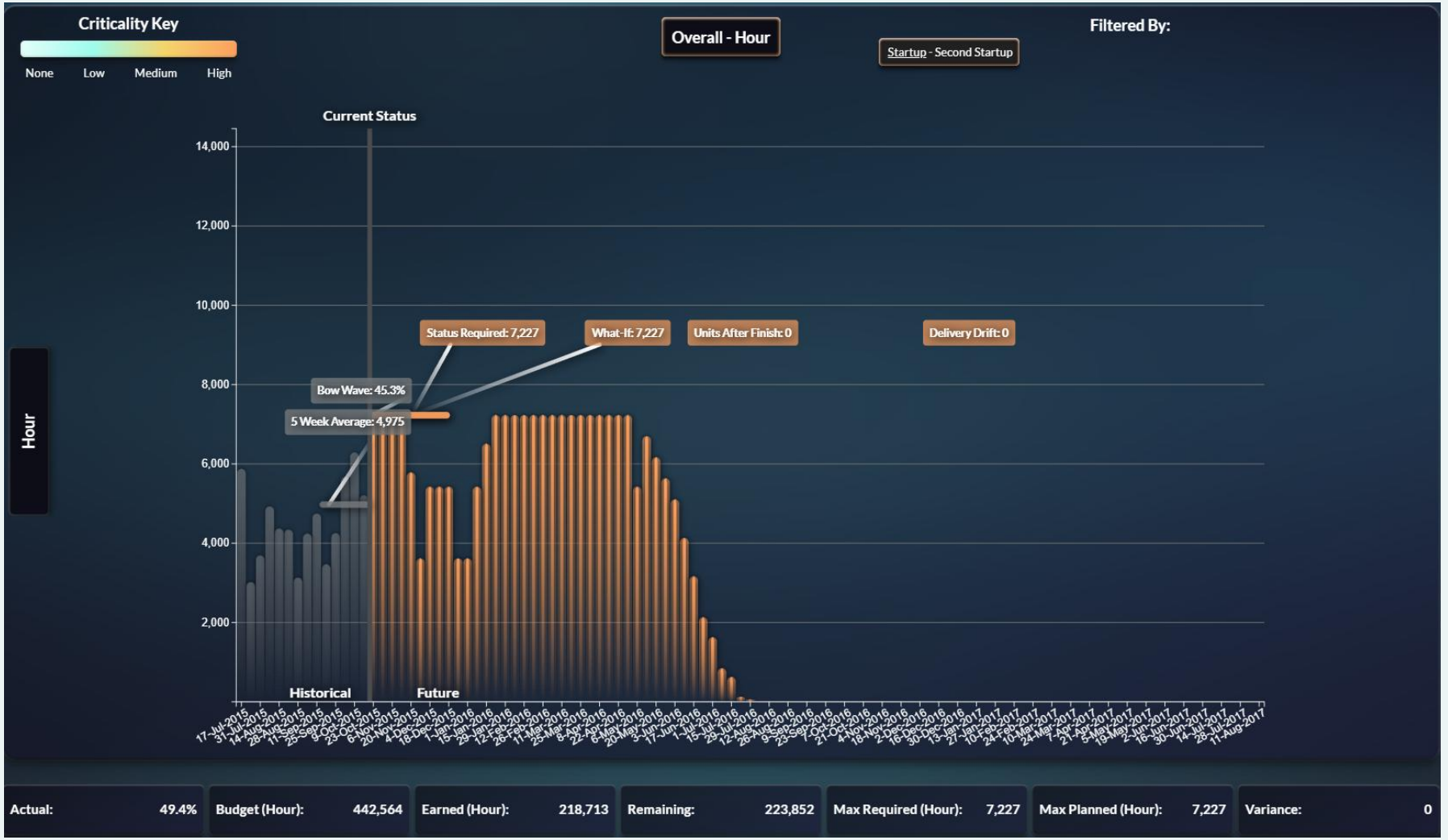
The Predictability Planning Framework by Day1

Step 4 Overview - Combining the first 3 steps into an understandable and cohesive system/progress the system.

1. Now you have the major work areas, when these areas will start and finish and what each of these progress line items contains.
2. These are all you need for the project plan. But you might ask what about critical path and float? One time I asked a senior British LNG client-side planner what the critical path of an LNG facility was and his answer was, Travis, when you are starting out it is in civil, then it goes to steel, then pipe and mechanical, E&I and completions. They did have some competing criticality between the LNG tanks and the facility but that is progress based. Any kid can give whatever critical path they want to any CPM schedule. I know, I've done it. Our focus is on production.
3. The exception is long lead equipment. Using the dates arrived at in Step 2 you can provide ROS float, but this isn't the same as CPM float. Our float will be determined by building bow waves.
4. This is the sweet spot of Day1, it's a system for combining these 3 elements. Before Day1 I used P6 level of effort (LOE) activities tied to the constrained milestones with lags to cover the offsets. It would get me a record for the worst schedule score ever recorded if I submitted it but it gave me what I called "fertilizer spreader" ability which I exported to a charting system.
5. Once you have 6 weeks of actual period progress pull back a 5-week rolling average site line. This cuts through the inaccuracy of the reporting, the games, the rules of credit not being perfect, rainy days, etc. This is your progress signal. The invaluable pulse of your project.
6. In front of the status date either Day1 or P6 LOEs can give you the future required spreads to meet your commitments. This is what we call in predictability planning "The Plan". It isn't a variance from a stagnant rearward facing monument. It's the go forward required.
7. Compare these 2. If the rolling actuals are less than the next period required, you are building a bow wave and that work is critical. Simple. Lastly, keep tabs of future, not started, activities, and ensure the required isn't getting compressed.

The Predictability Planning Framework by Day1

The output of step 4 inside Day1Model



DAY1

The Predictability Planning Framework by Day1

Step 5 Overview - What-if scenario generation. The foundational 2 what-ifs.

1. The purpose of this course is to empower you to provide clarity on your project. Up until this step you have tools with P6 LOEs and Excel, but step 5 is going to bring in more Day1Model. I'll still show you how to use P6 with relative painlessness but the entire purpose of Day1 is scenario generation so it's not a fair fight.
2. The first what-if scenario, the kingpin, that you must run with each reporting cutoff is: when I line up the pulse of the project with the required, where is this taking us. After about 30% complete you have most of the work started and can use that as a very predictable forecast for decision making. Here I'll open Day1Model and show you what that looks like and in the next slide I'll show you our standard deliverable output.
3. 3A. If all I had was P6 I would export the milestones, modify them by adding say 30 days and reimporting. Then run this several times until you dial in the actual/required.
4. The second one is to carry forward current productivity trends, scope changes, and weather variables. Most projects miss the mark at first and fine tune as they go along. If you need 100 electricians to earn 75 craft worth of work, factor that in. The only caveat is this is for go forward trends. In the prior example, if this is in stasis then don't forecast with it. Why? Because it will throw your system out of alignment. This is kind of a heavier subject but just keep in mind to only factor in labor trends. Quantities, yes, all day long get those budgets correct but labor is a different animal.
5. Once you have a solid set of what-if budgets from item 3 swap out your base plan variables and rerun. This is your most accurate forecast.
6. From here you can always play around with capping out headcounts, weather and holiday variables, etc. but this is secondary.
7. A director can steer a project confidently with these 2 foundational what-ifs. They really don't need more than this. Bow waves drive action and the ability to see in plain distribution, that you could explain to a 5th grader, where the project is heading, drives early, urgent and decisive action far earlier than probabilistic workshops, backward facing SPIs or massive CPM networks.

The Predictability Planning Framework by Day1

Day1 Deliverable – Base Case Tornado Chart (What-if scenario #1)

Bow Wave Impacts - Overall - Current Assumptions (The Vital 4™ Framework)								
Compression Data Points					Compression Sensitivity			
Description	Units	Actual Production Pace	Forecasted Variance (Days)	Required Recovery Pace	Order of Magnitude	Bow Wave Index	Bow Wave in 12 Weeks at Current Pace	Current % Complete
Heat Trace	Feet	1,693	>365	6,155		263%	470%	39.4%
Terminations	Each	238	315	798		234%	371%	27.1%
Restorations	Each	18	175	44		144%	217%	25.2%
Loop Checks	Each	7	147	75		119%	289%	5.1%
Hydro Tests	Each	19	91	33		78%	258%	42.1%
E&I Craft	FTE	100	70	135		35%	67%	61.3%
Overall Craft	FTE	221	285	251		14%	20%	70.6%
Cable Pulls	Feet	39,662	7	40,032		1%	2%	47.2%
Piping Craft	FTE	121	-7	115		-5%	-20%	77.6%

The Predictability Planning Framework by Day1

Day1 Deliverable – Schedule Compression Tornado Chart

Plan Compression - Second Startup - Current Assumptions (The Vital 4™ Framework)							
Compression Data Points					Compression Impact		
Description	Units	Planned Production Pace	Forecasted Variance (Days)	Required Recovery Pace	Order of Magnitude	Bow Wave Index	Current % Complete
Heat Trace	Feet	1,693	112	2,514		48%	0.0%
Hydro Tests	Each	12	112	20		67%	4.4%
Restorations	Each	12	105	19		58%	1.3%
Terminations	Each	160	98	234		46%	5.8%
Loop Checks	Each	23	84	33		43%	0.0%
E&I Craft	FTE	50	70	64		28%	29.9%
Cable Pulls	Feet	17,380	63	22,675		30%	21.1%
Overall Craft	FTE	115	35	131		14%	49.4%
Piping Craft	FTE	65	14	68		5%	61.1%

The Predictability Planning Framework by Day1

Day1 Deliverable – Trending Case Tornado Chart (What-if scenario #2)

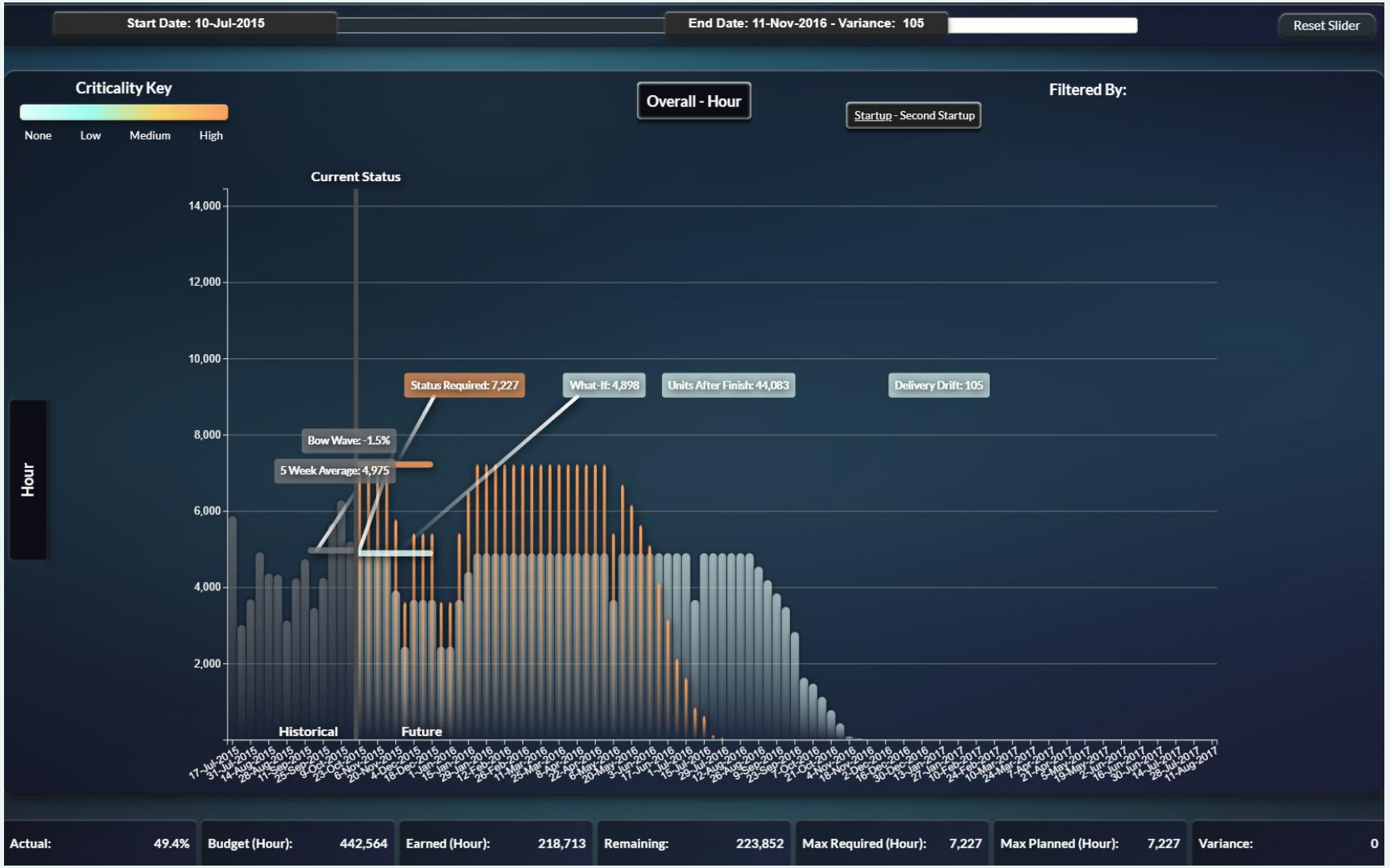
Bow Wave Impacts - Overall - Probable Assumptions (The Vital 4™ Framework)

Key Data Points					Production Risk Sensitivity			
Description	Units	Actual Production Pace	Forecasted Variance (Days)	Required Recovery Pace	Order of Magnitude	Bow Wave Index	Bow Wave in 12 Weeks at Current Pace	Current % Complete
Terminations	Each	338	308	870		265%	472%	27.1%
Restorations	Each	18	238	55		209%	405%	22.0%
Heat Trace	Feet	1,693	294	5,089		200%	386%	46.4%
Loop Checks	Each	7	161	18		146%	454%	5.1%
Hydro Tests	Each	19	161	45		141%	260%	36.8%
Piping Craft	FTE	121	84	189		56%	159%	69.8%
Overall Craft	FTE	221	77	332		50%	70%	66.7%
E&I Craft	FTE	100	70	142		42%	63%	62.1%
Cable Pulls	Feet	39,662	14	43,578		10%	66%	47.2%

DAY1

The Predictability Planning Framework by Day1

Day1 Deliverable – Redistribution of Slide #15 Inside of Day1Model



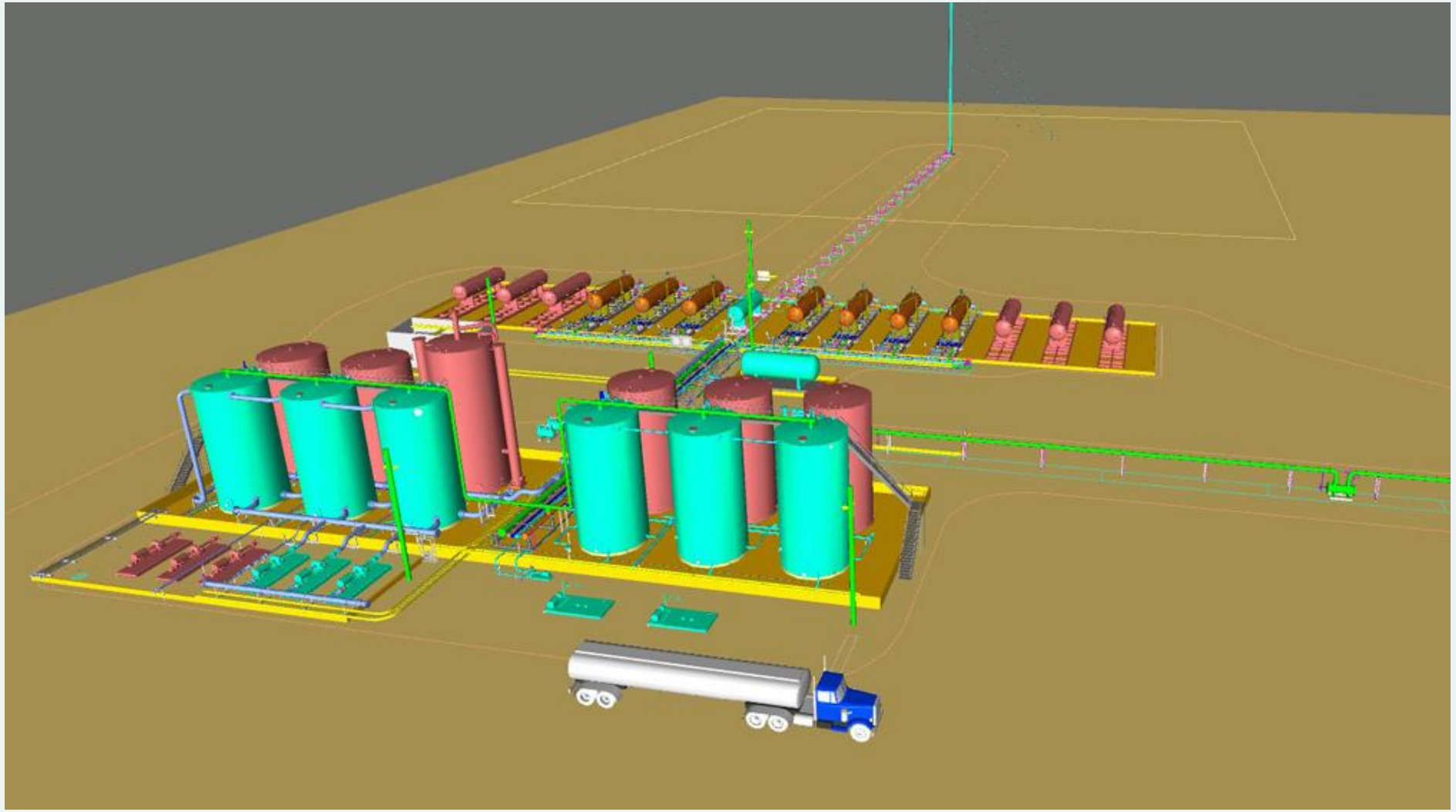
Thought Process Deep Dive

How I would apply the predictability framework for a series of projects.

This is an effort by 1 individual, imagine the fruit a 1-hour workshop with the project principals would produce.

The Predictability Planning Framework by Day1

Typical Wellpad Model Shot. How a full field development would look like.



The Predictability Planning Framework by Day1

Tension Leg Platform

The Predictability Planning Framework by Day1

LNG Process Module

The Predictability Planning Framework by Day1

Onshore LNG Facility

The Predictability Planning Framework by Day1

Road and Bridge

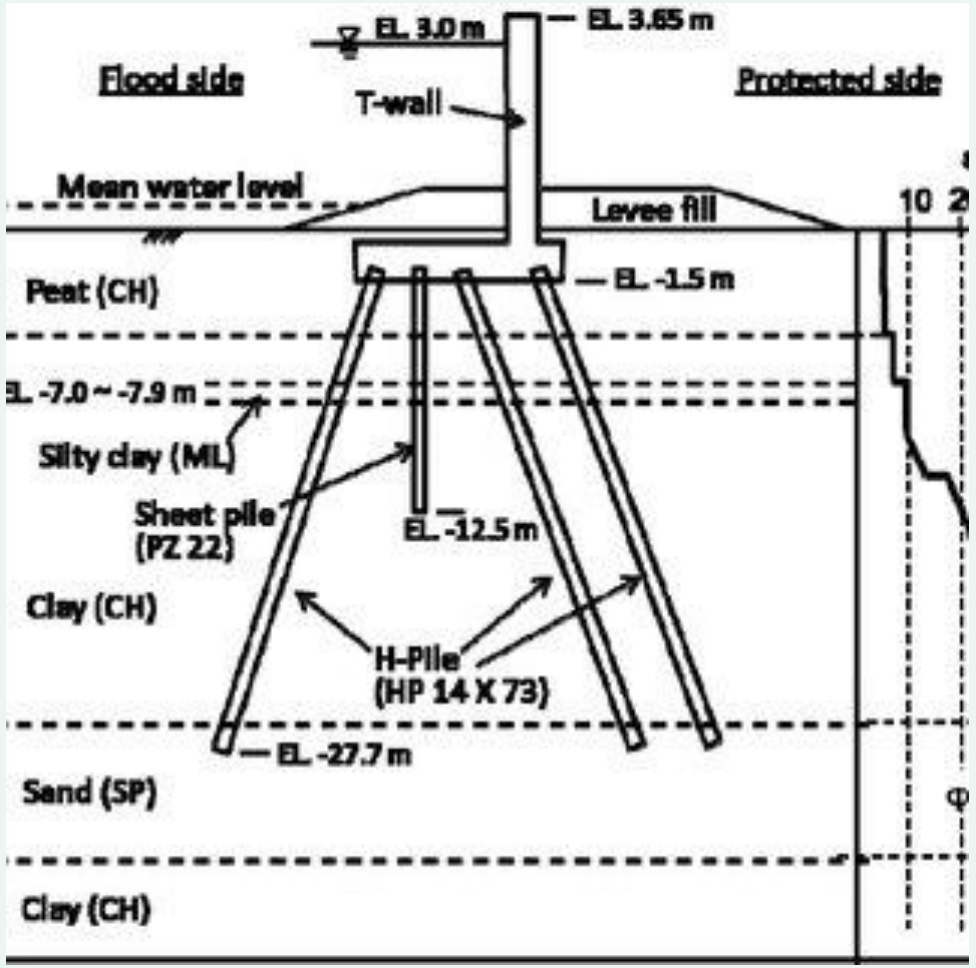
DAY1

The Predictability Planning Framework by Day1

Sector Gate Dam

The Predictability Planning Framework by Day1

T Wall Levee



DAY1

The Predictability Planning Framework by Day1

Data Center

The Predictability Planning Framework by Day1

Lithium Mine

The Predictability Planning Framework by Day1

Industrial Project Completions

Unit of Measure	Unit Rate Description	Unit Rate	Activity Units	Type of Activity	Budget Quantity	Budget Hours	Earned Quantity	Earned Hours	Unique Work Area	Activity Description	Units
Hour	0.00	0.00	Hour	Hour	350		350		Sub-System-01-12	Completion Hours	Hour
Spool	Pipe Installation	10.00	Spool	Quantity	-	-	-	-	Sub-System-01-12	Pipe Installation	Spool
Spool	Pipe Testing	3.00	Spool	Quantity	-	-	-	-	Sub-System-01-12	Pipe Testing	Spool
Spool	Pipe Restorations	3.00	Spool	Quantity	-	-	-	-	Sub-System-01-12	Pipe Restorations	Spool
EA	E&I Equipment	35.00	EA	Quantity	1	35	1	35	Sub-System-01-12	E&I Equipment	EA
LM	E&I Cable Pulling	0.50	LM	Quantity	246	123	246	123	Sub-System-01-12	E&I Cable Pulling	LM
EA	E&I Cable Glanding	3.00	Spool	Quantity	24	72	24	72	Sub-System-01-12	E&I Cable Glanding	EA
EA	E&I Terminations	3.00	EA	Quantity	24	72	24	72	Sub-System-01-12	E&I Terminations	EA
EA	ITR-As	3.00	EA	Quantity	13	39	13	39	Sub-System-01-12	ITR-As	EA
EA	ITR-Bs	3.00	EA	Quantity	3	9	3	9	Sub-System-01-12	ITR-Bs	EA
Hour	0.00	0.00	Hour	Hour	365		365		Sub-System-01-13	Completion Hours	Hour
Spool	Pipe Installation	10.00	Spool	Quantity	-	-	-	-	Sub-System-01-13	Pipe Installation	Spool
Spool	Pipe Testing	3.00	Spool	Quantity	-	-	-	-	Sub-System-01-13	Pipe Testing	Spool
Spool	Pipe Restorations	3.00	Spool	Quantity	-	-	-	-	Sub-System-01-13	Pipe Restorations	Spool
EA	E&I Equipment	35.00	EA	Quantity	1	35	1	35	Sub-System-01-13	E&I Equipment	EA
LM	E&I Cable Pulling	0.50	LM	Quantity	276	138	276	138	Sub-System-01-13	E&I Cable Pulling	LM
EA	E&I Cable Glanding	3.00	Spool	Quantity	24	72	24	72	Sub-System-01-13	E&I Cable Glanding	EA
EA	E&I Terminations	3.00	EA	Quantity	24	72	24	72	Sub-System-01-13	E&I Terminations	EA
EA	ITR-As	3.00	EA	Quantity	13	39	13	39	Sub-System-01-13	ITR-As	EA
EA	ITR-Bs	3.00	EA	Quantity	3	9	3	9	Sub-System-01-13	ITR-Bs	EA

The Predictability Planning Framework by Day1

FEED Predictability Framework

1. Organize by CTR records, Cost/Time/Resource.
2. Spread these in between your major established milestones such as: Begin FEED, key model reviews, HAZOP, Go to Bid, Receive Bids,

Detailed Design Predictability Framework

1. The master document register is the source of the system. Spread by major disciplines, progress 3D model separately, weight out disciplines by effort. Base in hours. Use drawing steps from initiation to issue for use as your rules of credit. Gross up hours if needed to provide a proportional weighting to your entire system.

Procurement Progress Predictability Framework

1. Procurement register is the master document. Decide what the major steps will be…from RFQ to delivered to site. Earn back the hours by these rules of credit. Gross up the hours as necessary to be proportional to your overall system. Have a scale of complexity to determine base hours.