EFCOG

KIEWIT'S DIGITAL TRANSFORMATION


"The best contracting organization on Earth"
-Peter Kiewit

KIEWIT

A LEGACY OF BUILDING EXCELLENCE

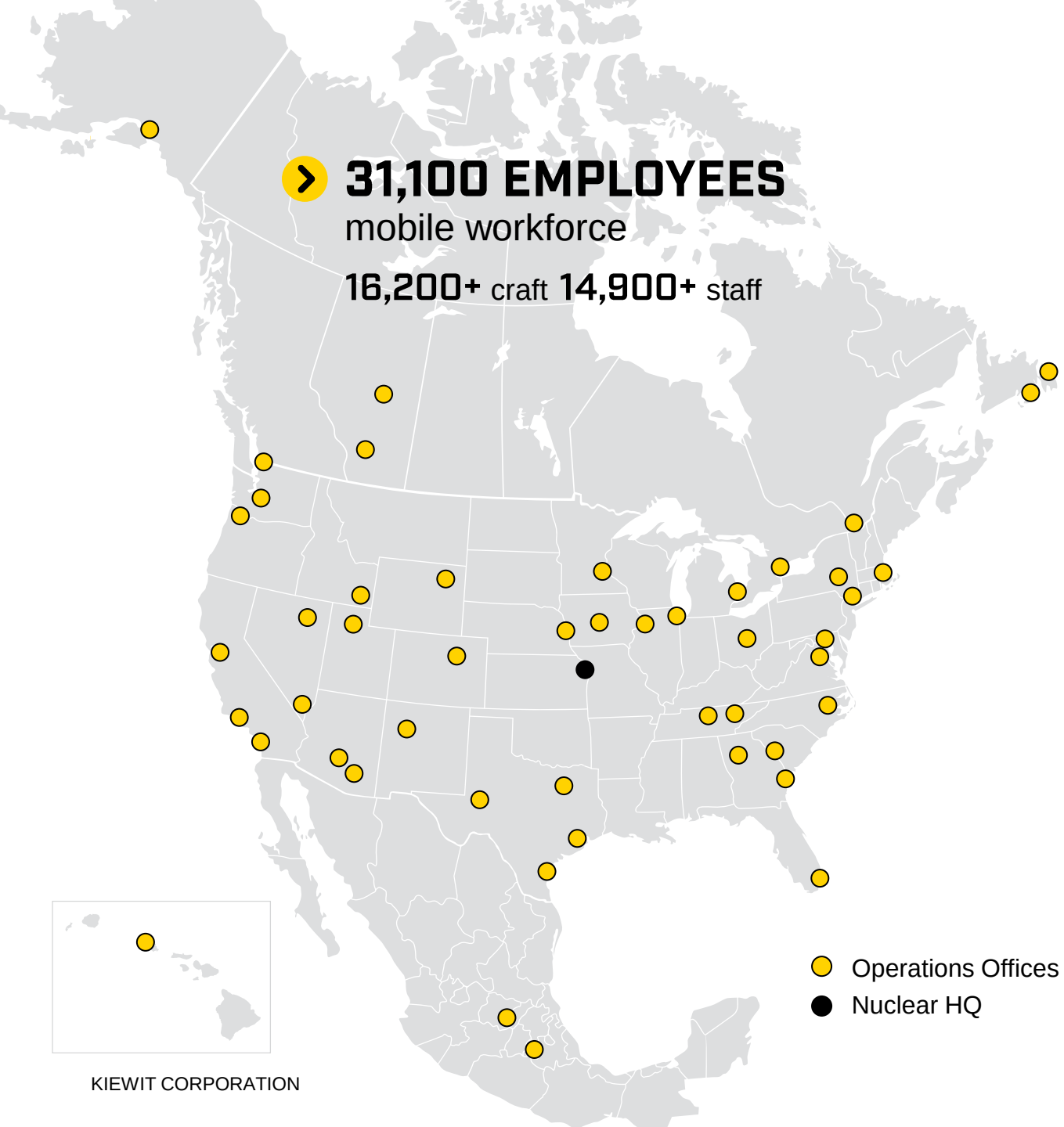
SUBSTANTIAL FINANCIAL & TECHNICAL RESOURCES

140
YEARS IN BUSINESS

67M+
DIRECT-HIRE MANHOURS

80%
Self-Perform

$4.5B
KIEWIT-OWNED EQUIPMENT



A CULTURE LIKE NO OTHER

A workplace where people want to stay, grow and thrive.

FOUNDED IN 1884

From roots as a local masonry contractor to consistently ranked Top 5 ENR contractor

CONSISTENT LEADERSHIP

Six CEOs in 90+ years, average tenure of 34 years

RESULTS-ORIENTED

Benchmark-based estimating designed to provide cost and schedule certainty

ONE OF THE LARGEST PRIVATELY OWNED FIRMS IN NORTH AMERICA

Employees are encouraged to think like owners – make decisions for long-term sustainability vs. short-term growth

ROOTED LOCALLY, DELIVERING NATIONALLY

3,600+ ENGINEERS & DESIGNERS ACROSS NORTH AMERICA

ENGINEERS BY **MARKET**

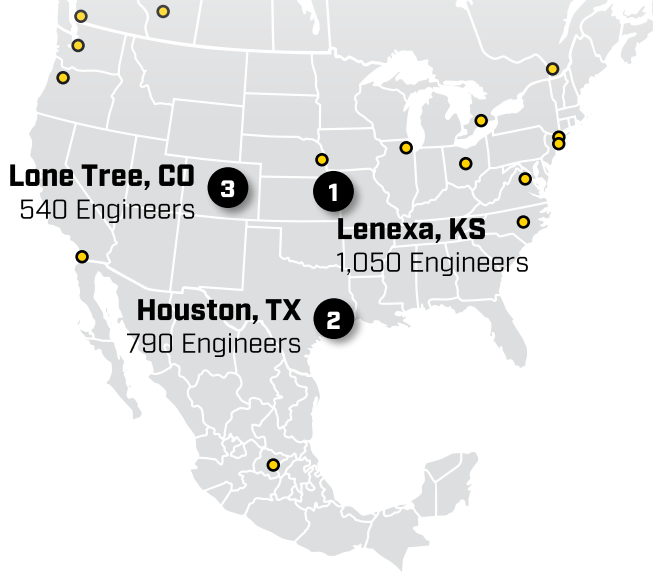
ENGINEERS BY **DISCIPLINE**

LICENSED ENGINEERS

IN ALL 50 U.S. STATES & 8 CANADIAN PROVINCES

3,000+

PROFESSIONAL ENGINEER LICENSES



Engineering Headquarters

Primary Engineering Support Offices

SOURCING FOR PROJECT SUCCESS

UNMATCHED PURCHASING POWER

430
PROCUREMENT STAFF
across U.S., Canada & Mexico

$8B
ANNUAL GLOBAL
procurement spend

190
ACTIVE PROJECTS
supported by in-house experts

ENGINEERING NEWS RECORD

2024 NATIONAL CONTRACTOR RANKINGS

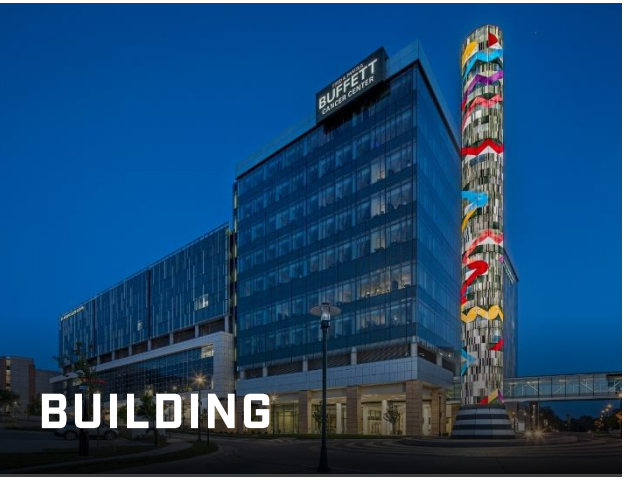
These rankings serve as indicators of Kiewit's size, experience and market presence.

- #2 OVERALL
- #3 NUCLEAR PLANTS
- #2 POWER
- #3 DESIGN-BUILD FIRM
- #1 FOSSIL FUEL CONTRACTOR
- #1 DOMESTIC HEAVY
- #5 TRANSMISSION & DISTRIBUTION

MARKET DIVERSITY

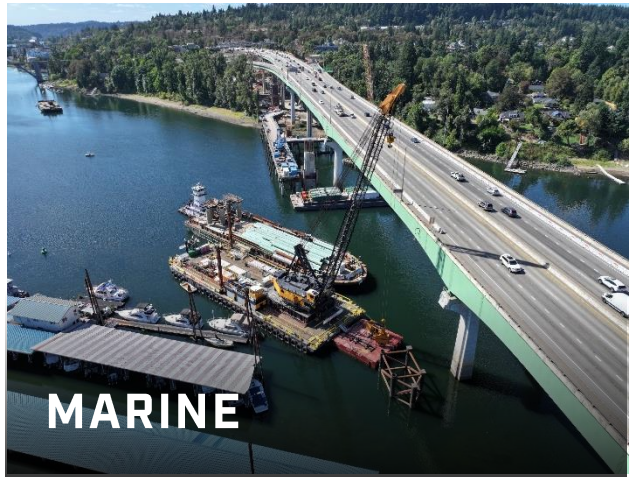
OUR SERVICES

Engineering and construction under one roof for streamlined execution.

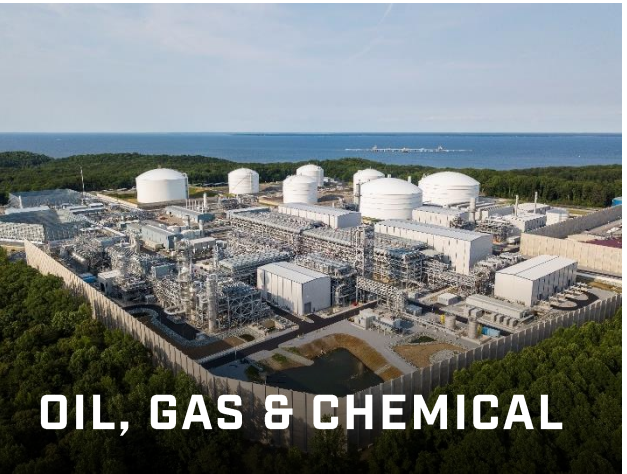


BUILDING


INDUSTRIAL


MARINE


MINING


OIL, GAS & CHEMICAL

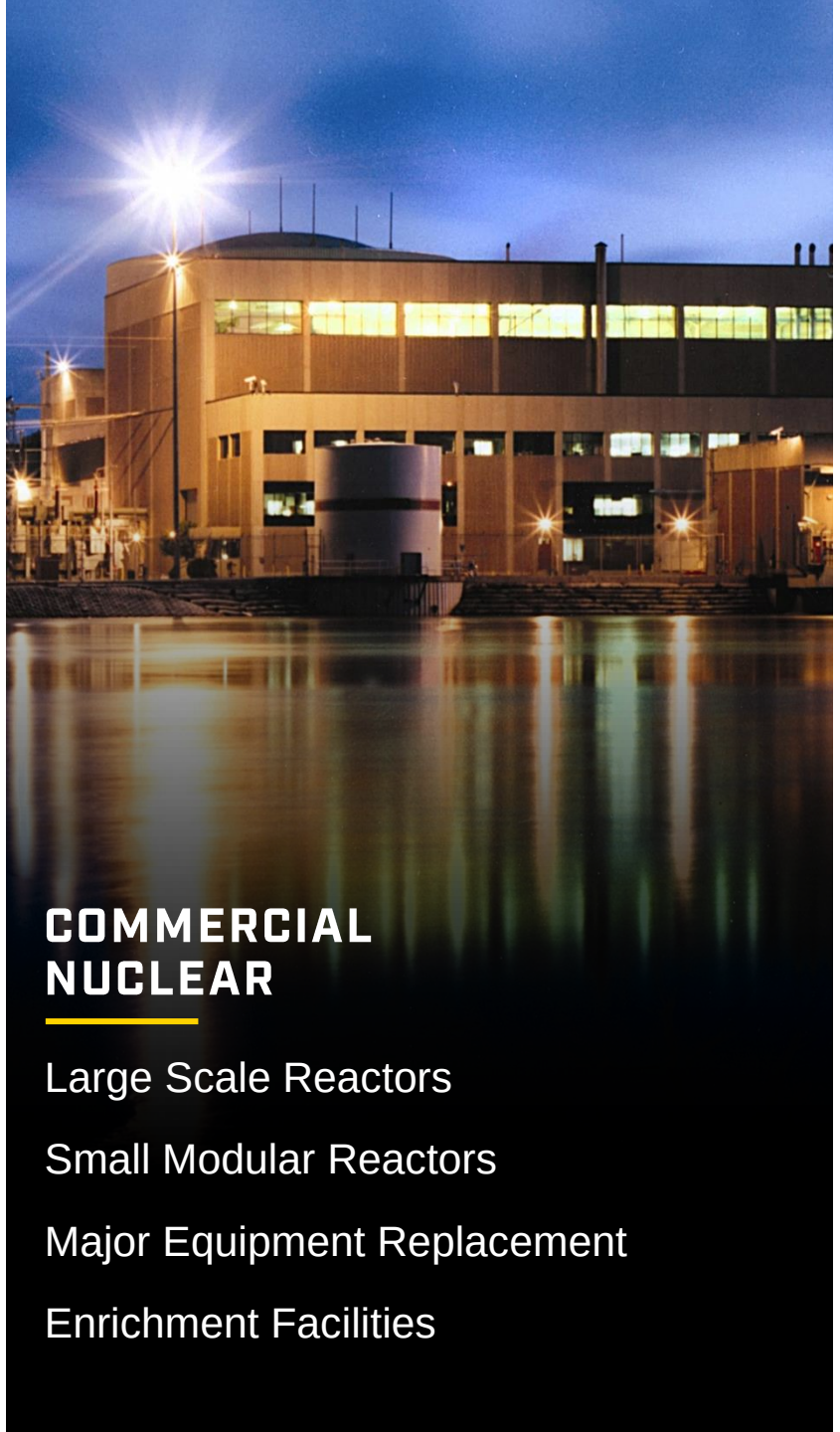

POWER


TRANSPORTATION


WATER

DEPARTMENT OF ENERGY (NNSA, OS, EM)

- Infrastructure Modernization
- Production Facilities
- Capital Projects
- General Plant Projects



COMMERCIAL NUCLEAR

- Large Scale Reactors
- Small Modular Reactors
- Major Equipment Replacement
- Enrichment Facilities

NUCLEAR ENGINEERING

HISTORICAL

NUCLEAR EXPERIENCE

NEW REACTOR BUILDS

First billion-dollar job in 1952

1950-80s

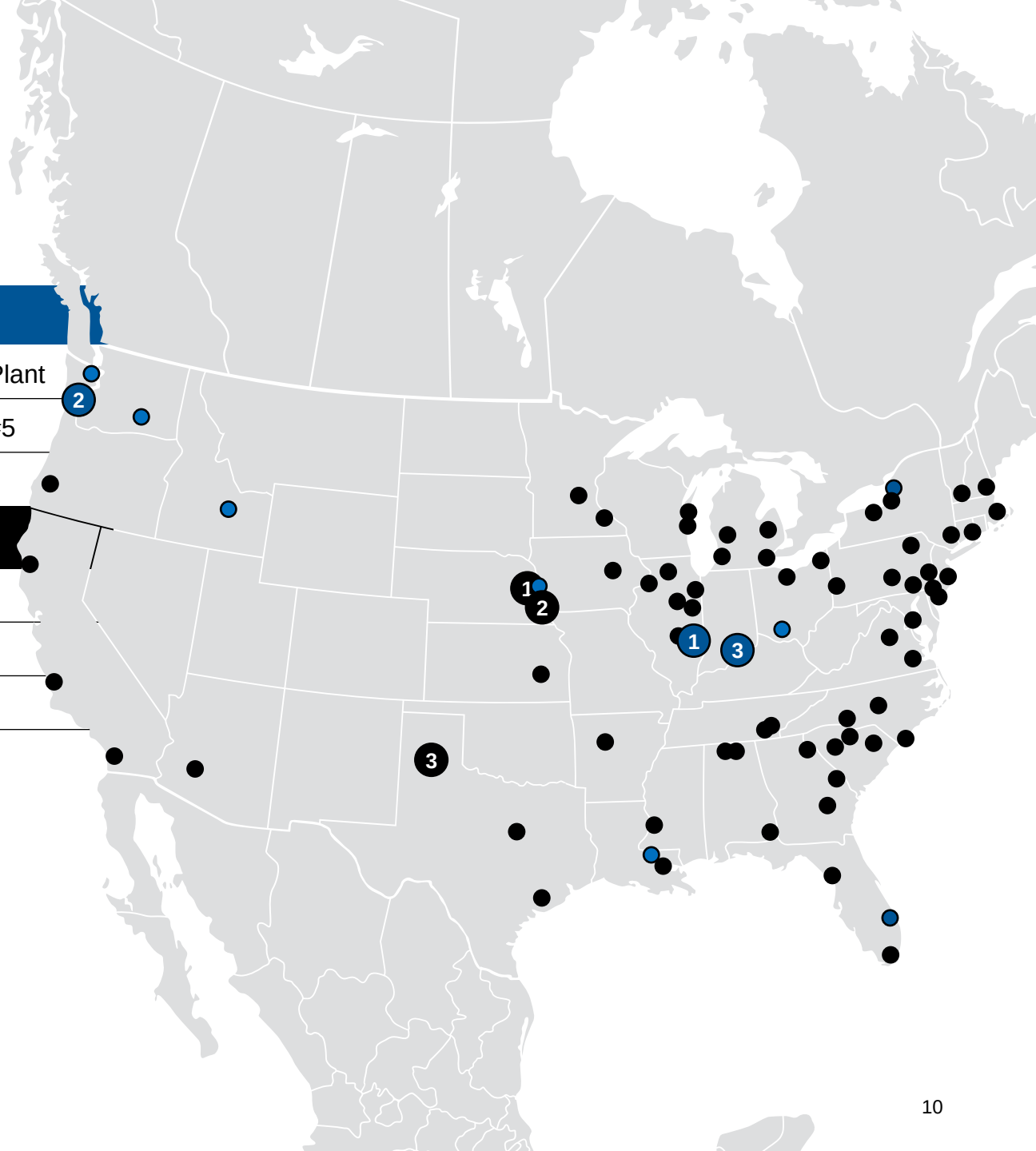
1. Portsmouth Gaseous Diffusion Plant
2. Satsop Nuclear Station #3 and #5
3. Marble Hill Units 1&2

MAINTENANCE/MODIFICATIONS AND CAPITAL PROJECTS

1980s-2014

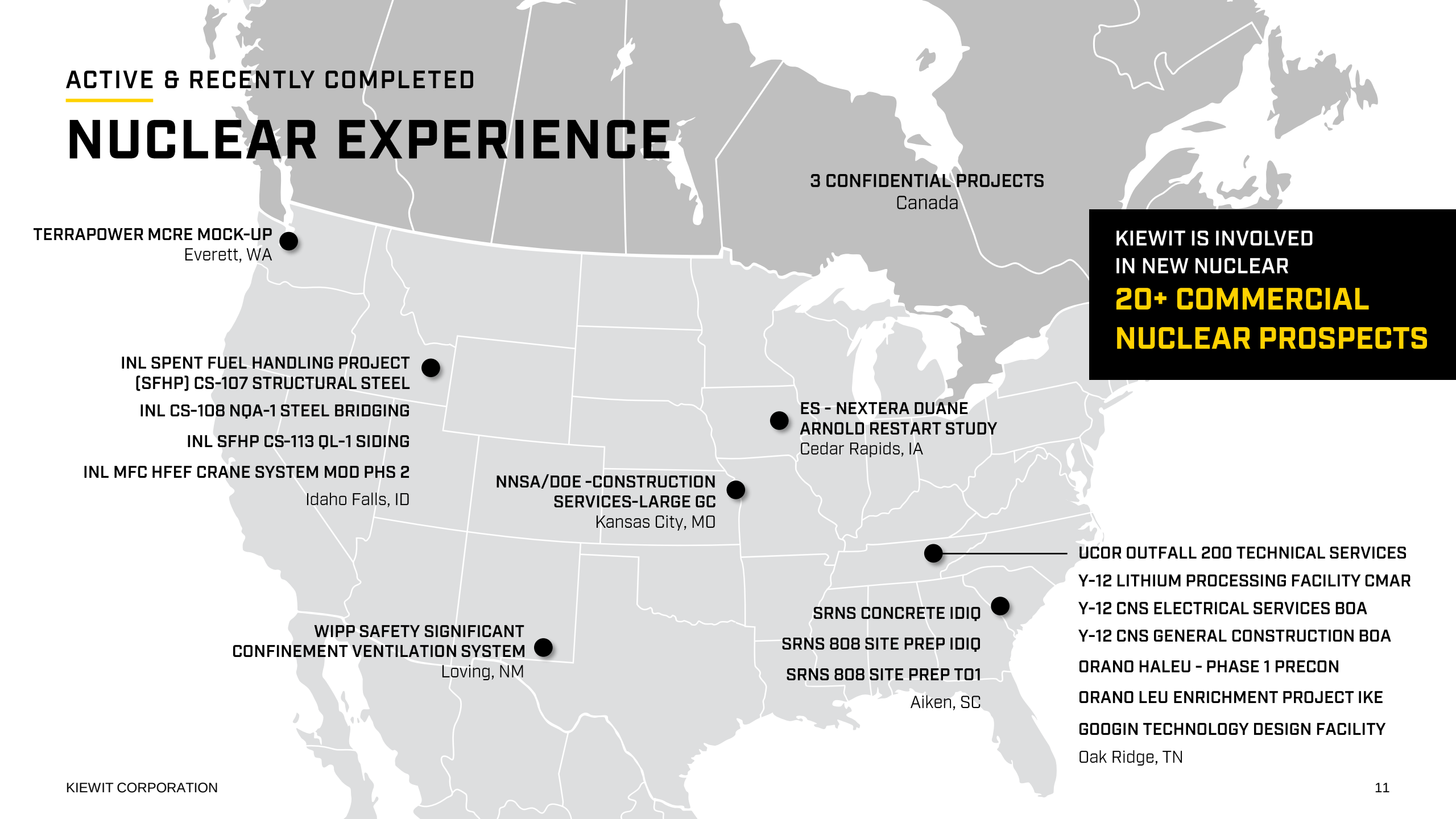
1. Fort Calhoun Nuclear Station
2. Cooper Nuclear Station
3. High Explosive Pressing Facility

● Completed work ● Prior to 2010



ACTIVE & RECENTLY COMPLETED

NUCLEAR EXPERIENCE



3 CONFIDENTIAL PROJECTS
Canada

TERRAPOWER MCRE MOCK-UP
Everett, WA

KIEWIT IS INVOLVED IN NEW NUCLEAR
20+ COMMERCIAL NUCLEAR PROSPECTS

INL SPENT FUEL HANDLING PROJECT (SFHP) CS-107 STRUCTURAL STEEL
INL CS-108 NQA-1 STEEL BRIDGING
INL SFHP CS-113 QL-1 SIDING
INL MFC HFEF CRANE SYSTEM MOD PHS 2
Idaho Falls, ID

ES - NEXTERA DUANE ARNOLD RESTART STUDY
Cedar Rapids, IA

NNSA/DOE -CONSTRUCTION SERVICES-LARGE GC
Kansas City, MO

UCOR OUTFALL 200 TECHNICAL SERVICES
Y-12 LITHIUM PROCESSING FACILITY CMAR
Y-12 CNS ELECTRICAL SERVICES BOA
Y-12 CNS GENERAL CONSTRUCTION BOA
ORANO HALEU - PHASE 1 PRECON
ORANO LEU ENRICHMENT PROJECT IKE
GOOGIN TECHNOLOGY DESIGN FACILITY
Oak Ridge, TN

WIPP SAFETY SIGNIFICANT CONFINEMENT VENTILATION SYSTEM
Loving, NM

SRNS CONCRETE IDIQ
SRNS 808 SITE PREP IDIQ
SRNS 808 SITE PREP T01
Aiken, SC


SEP 18 2003

DATA & DIGITAL INTEGRATION

WHY WE ARE HERE TODAY

THEN AND NOW

KIEWIT'S DIGITAL TRANSFORMATION

COLLECTIVE SYSTEM IMPLEMENTATION INCREASED STAFF EFFICIENCY BY 40%

1980-2010

Kiewit spreadsheets and home built systems

- No shared services, shared data or common project management solutions
- Only one consolidation of project/company performance at the end of each month

2015

Kiewit creates the subsidiary, InEight, and begins to sell our solutions commercially

- Data in a "Cloud" platform & fully integrated
- Fully deployed to all 35 +/- business units

INEIGHT

2011

Kiewit sets out on journey to become a "Premier Data Driven Construction & Engineering Firm"

2024

InEight has more than 750 Customers Worldwide utilizing our project management solutions across owners, engineering & construction firms


Dartmouth College

Kiewit Computation Center


THE KIEWIT COMPUTATION CENTE
ESTABLISHED 1966
THROUGH THE GENEROSITY OF
PETER AND EVELYN KIEWIT 192

WHY PROJECTS FAIL

#1 Poor Front-End Planning & Scope Definition

#2 Unrealistic Cost & Schedule Estimates

#3 Contracting & Risk Allocation Failures

#4 Supply Chain & Workforce Challenges

#5 Ineffective Project Execution & Governance

BROKEN DATA

LACK OF CONTROL

KEY CHALLENGES FOR OWNERS & CONTRACTORS

Inefficient methods of sharing information – across internal roles and external stakeholders – due to disconnected systems and unenforced workflows.

LACK OF ABILITY TO COLLABORATE

SCOPE

Limited visibility into impact and risk from changes in project scope, quantities and deliverables.

COST

Hampered decision making due to untimely cost data, slow and inconsistent workflows, unidentified risks, and poor data quality.

SCHEDULE

Poor recognition and mitigation of schedule risk, inaccurate progress capture, and disconnected planning and scheduling processes.

what are the some of the largest industries that are the least data driven?

Some of the largest industries that are **least data-driven** tend to have legacy operations, regulatory complexity, or a reliance on human expertise over digital tools. While these industries may be adopting data analytics, they still lag behind in leveraging data for decision-making at scale. Here are some notable ones:

1. Construction

- **Why?** Traditionally relies on experience, intuition, and relationships rather than data analytics.
- **Challenges:** Fragmented supply chains, lack of standardized data, resistance to tech adoption, and project-based structures that limit long-term data accumulation.
- **Opportunities:** AI for predictive maintenance, better project tracking, and digital twins.

2. Legal Services

- **Why?** Heavy reliance on precedent, legal expertise, and subjective interpretation over quantitative analysis.
- **Challenges:** Data privacy concerns, lack of structured data, and limited automation in complex case analysis.

Kiewit

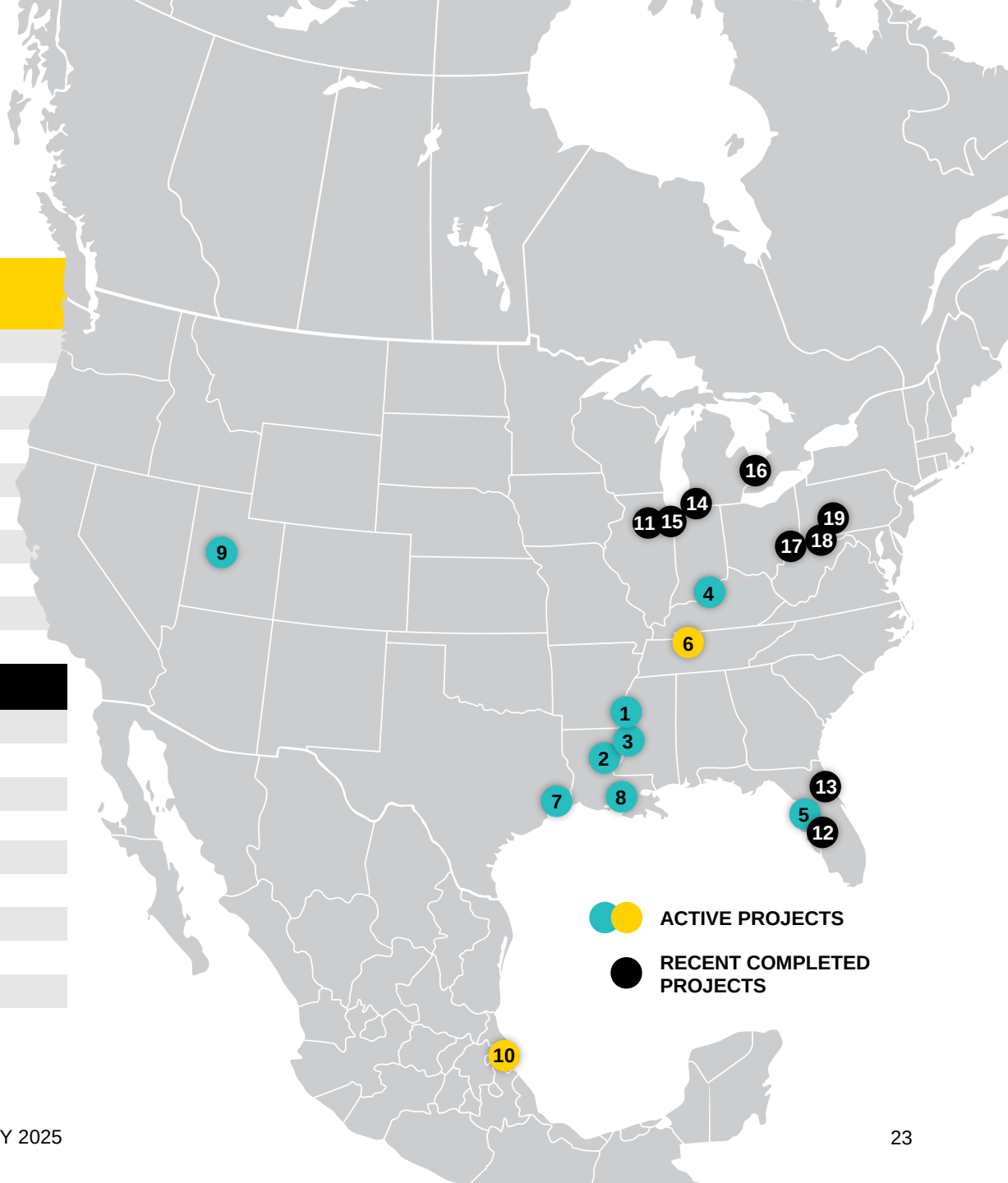
*“There are no **new lessons learned**, just **new people learning old lessons**.”*

COMBINED CYCLE STORY

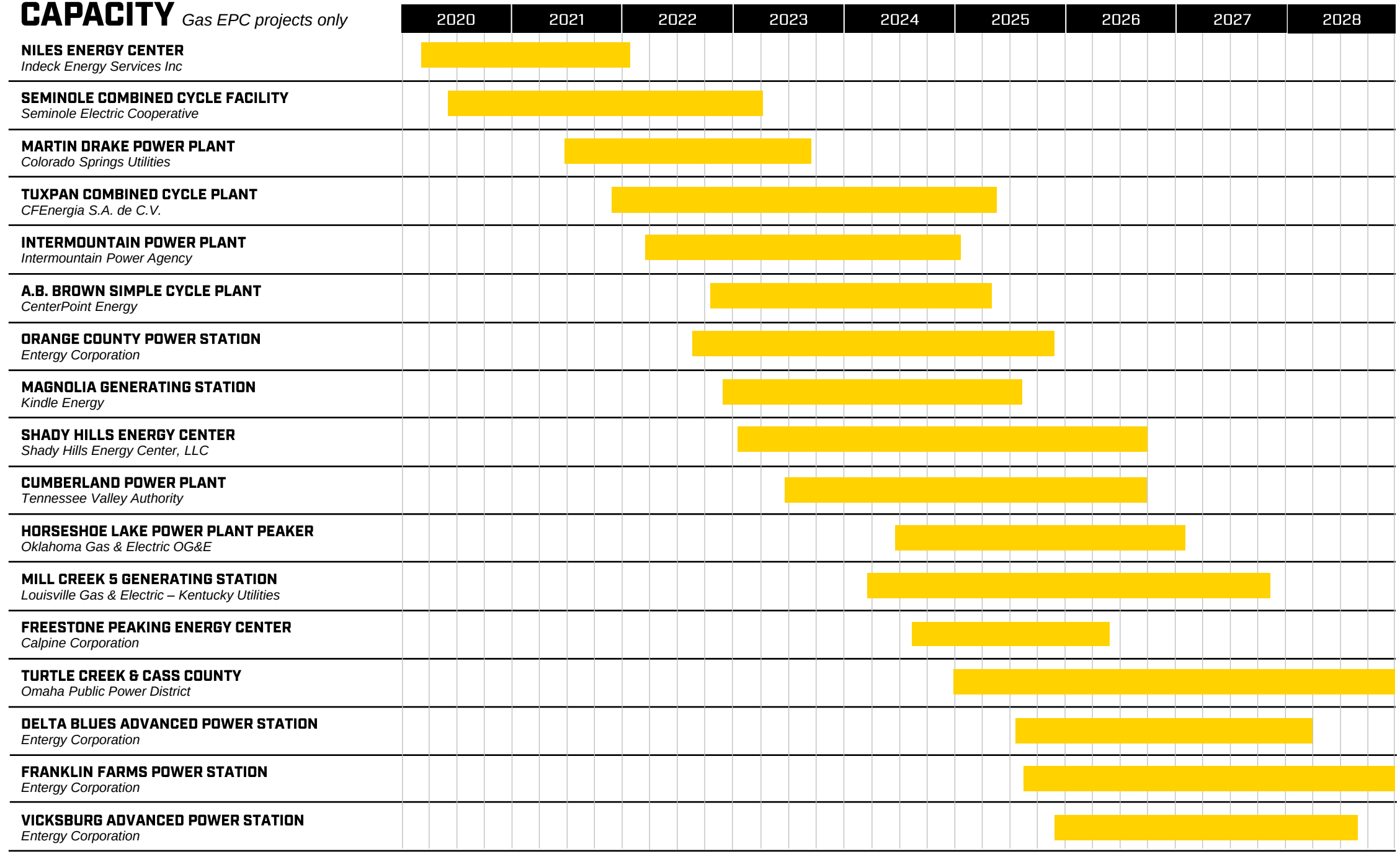
SELECT PROJECTS

COMBINED-CYCLE

	PROJECTS	TECHNOLOGY/ CONFIGURATION	SIZE
1	Delta Blues Advanced Power Station (2028)	1x1 MPWA 501JAC	754 MW
2	Franklin Farms Power Station (2028)	2-1x1 MPWA 501JAC	1,508 MW
3	Vicksburg Advanced Power Station (2028)	1x1 MPWA 501JAC	754 MW
4	Mill Creek 5 Generating Station (2027)	1x1 GE 7HA.03 SS	645 MW
5	Shady Hills Energy Center (2027)	1x1 GE 7HA.02 SS	550 MW
6	Cumberland Power Plant (2026)	2-1x1 GE 7HA.03	1,450 MW
7	Orange County Power Station (2026)	2x1 MPWA 501JAC	1,215 MW
8	Magnolia Power Generating Station (2025)	1x1 GE 7HA.03 SS ACC	705 MW
9	Intermountain Power Plant Renewal (2025)	2-1x1 MPWA 501JAC SS	840 MW
10	Tuxpan Phase 1 (2025)	2x1 Siemens 9000 HL	1,057 MW
	RECENT COMPLETED PROJECTS		
11	Three Rivers Energy Center	2-1x1 GE 7HA.02 SS ACC	1,250 MW
12	Big Bend Unit 1 Modernization	2x1 GE 7HA.02	1,090 MW
13	Seminole Combined-Cycle Facility	2x1 GE 7HA.02	1,050 MW
14	Niles Energy Center	2x1 GE 7HA.02 ACC	1,000 MW
15	Jackson Energy Center	2-1x1 MPWA JAC SS ACC	1,200 MW
16	Blue Water Energy Center	2x1 GE 7HA.02	1,150 MW
17	Long Ridge Energy Center	1x1 GE 7HA.02 SS	485 MW
18	Hill Top Energy Center	1x1 GE 7HA.02 SS	620 MW
19	Fairview Energy Center	2x1 GE 7HA.02	1,050 MW



CAPACITY *Gas EPC projects only*



POWERED BY INEIGHT

KIEWIT TECHNOLOGY

The InEight platform was created based on how Kiewit builds work. No other InEight customer has a comparable experience with the tools that are available to Kiewit.

REAL-TIME DATA/FORECASTING

Access to vast network of real-world jobs/data and labor inputs

COST AND SCHEDULE CERTAINTY

Accurate estimates, whether it be for a FEED or lump sum quote.

PROJECT VISIBILITY

Greater transparency during the project lifecycle.

RISK MITIGATION

Risks are identified, analyzed and monitored.

SEAMLESS DATA TURNOVER

Project data can be seamlessly handed over to our clients.

MARCH 2022

GAO CASE STUDY

GAO Case Study outlines Industry best practices in Project Delivery

KIEWIT INTERVIEWED ON:

- Maintain a Realistic Assessment of Product Development Activities
  - Early contractor involvement minimized construction and engineering challenges to allowing for more achievable schedules. This early engagement allows for clients and Kiewit to align priorities and allocation of risk.
- Preserve Institutional Memory and Share Corporate Knowledge
  - By utilizing the InEight software Kiewit can leverage past project data to make real-time data driven decisions to proactively manage project success and mitigate risk.
- Invest Time to Research a Marketable Product
  - Kiewit implements alternative delivery models to reduce risk and delivery projects on schedule.

- **Amazon** developed a formal process, a platform known as the Archive—a repository that captures what did or did not work on a previous development project. If an employee proposes a new effort of a previous project that failed, Amazon leadership has the ability to go back to the Archive to understand if the reasons for the failed project have fundamentally changed. If those reasons have changed, Amazon can go forward with the product idea. If the reasons have not changed, the decision is most likely to be no.

Kiewit's InEight Software Provides Institutional Memory with Insight into Past Performance

Kiewit developed the InEight software to provide project management, document management, and virtual design and construction tools, among others, to its workforce. The software also utilizes artificial intelligence (AI) to help inform schedule. As a result, management can look at projects the company built over time and project what a current project will cost and how long it will take. The company can aggregate historical data from previous clients and what Kiewit provided them. If a current client wants a project to go faster, Kiewit can piece together parts from prior schedules using the AI technology to obtain those schedule goals. For example, Kiewit might use different shift arrangements based on the productivity it achieved in similar work on a prior project. The cloud-based software also allows contract data to be shared with project teams in the field, allowing management to collect data on what is being accomplished on a daily basis and compare this with the contract module. These data can then be integrated with the forecast module and updated in real time. The more real-time data Kiewit can manage, the quicker practitioners can make adjustments in the field, saving overall costs.

Source: GAO summary of Kiewit information. | GAO-22-104513

Evaluate Cost, Schedule, and Performance Parameters Continuously

In addition to initially ensuring project teams can deliver products within cost and schedule targets, leading companies in our review continuously—meaning at recurrent intervals—evaluate cost, schedule, and performance parameters before committing to a public release date. By doing so, leading companies increase their confidence that the product will meet those cost, schedule, and performance targets and can take corrective actions, if necessary, to avoid cost or schedule overruns. For example:

- Only after **Qualcomm** has conducted initial engineering efforts and refined its cost estimates does the company commit to actually building the project. At that point, the company establishes a budget and sets a committed date for the first customer shipment.
- **GE Renewable Energy** continuously evaluates cost and schedule estimates and reaches a high confidence level that they can execute its program cost and schedule

Page 23 GAO-22-104513 Leading Practices

> *The more **real-time data Kiewit can manage**, the quicker practitioners can make adjustments in the field, **saving overall costs.***
>
> *GAO Leading Practices Report*

POWERED BY INEIGHT

KIEWIT TECHNOLOGY

The InEight platform was created based on how Kiewit builds work. No other InEight customer has a comparable experience with the tools that are available to Kiewit.

INTRINSIC PROCESSES

- Kiewit processes were the foundation
- Kiewit experts built the solution
- Kiewit projects beta tested the workflows
- Kiewit client best-practices are baked into the software

TIME IN THE TOOLS

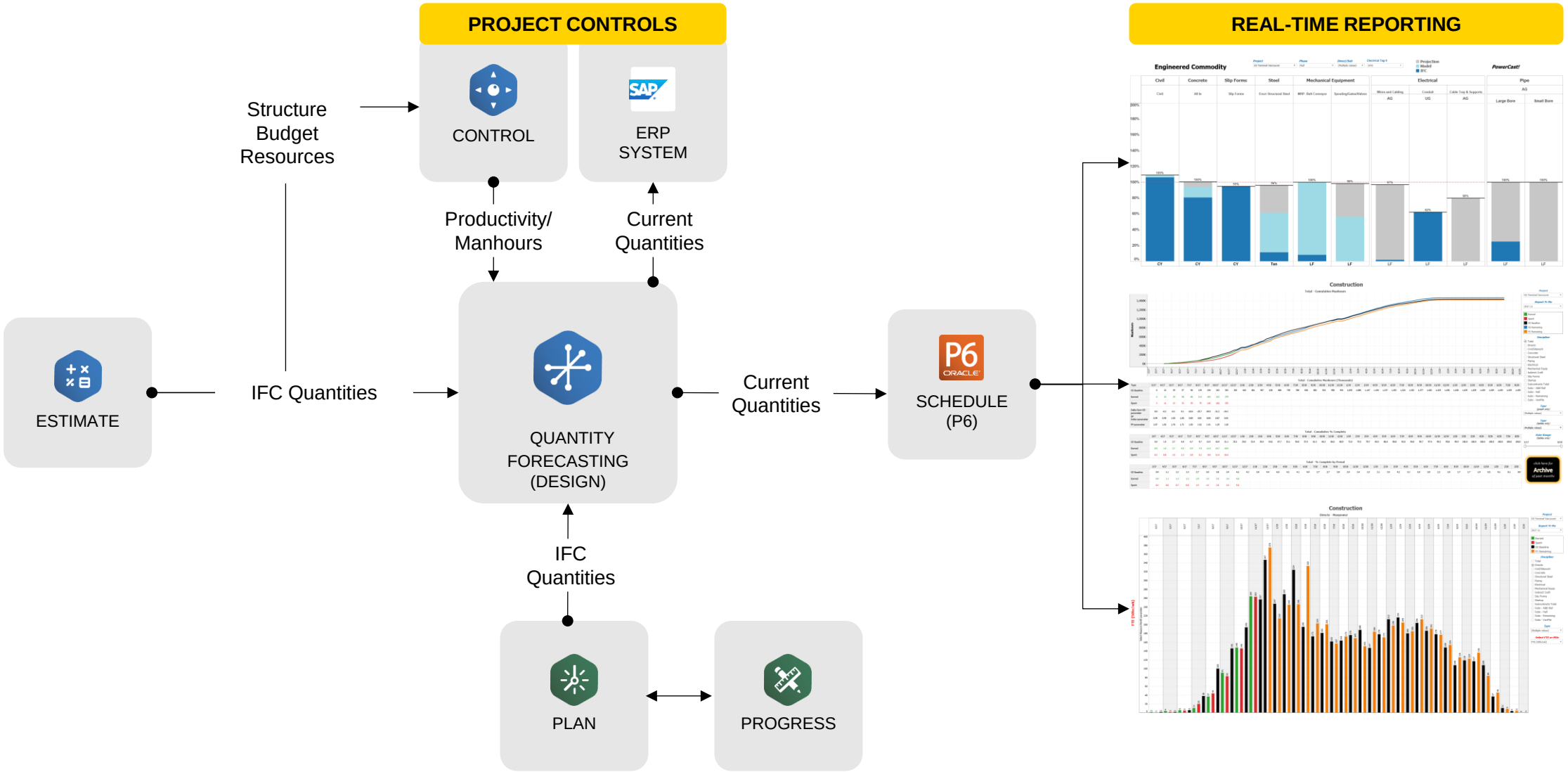
- 1000s of active projects running on InEight
- 6,100+ unique users in the system
- 35,000-40,000 syncs on peak days
- 45% improvement in staff productivity since implementing InEight

POWERED BY INEIGHT

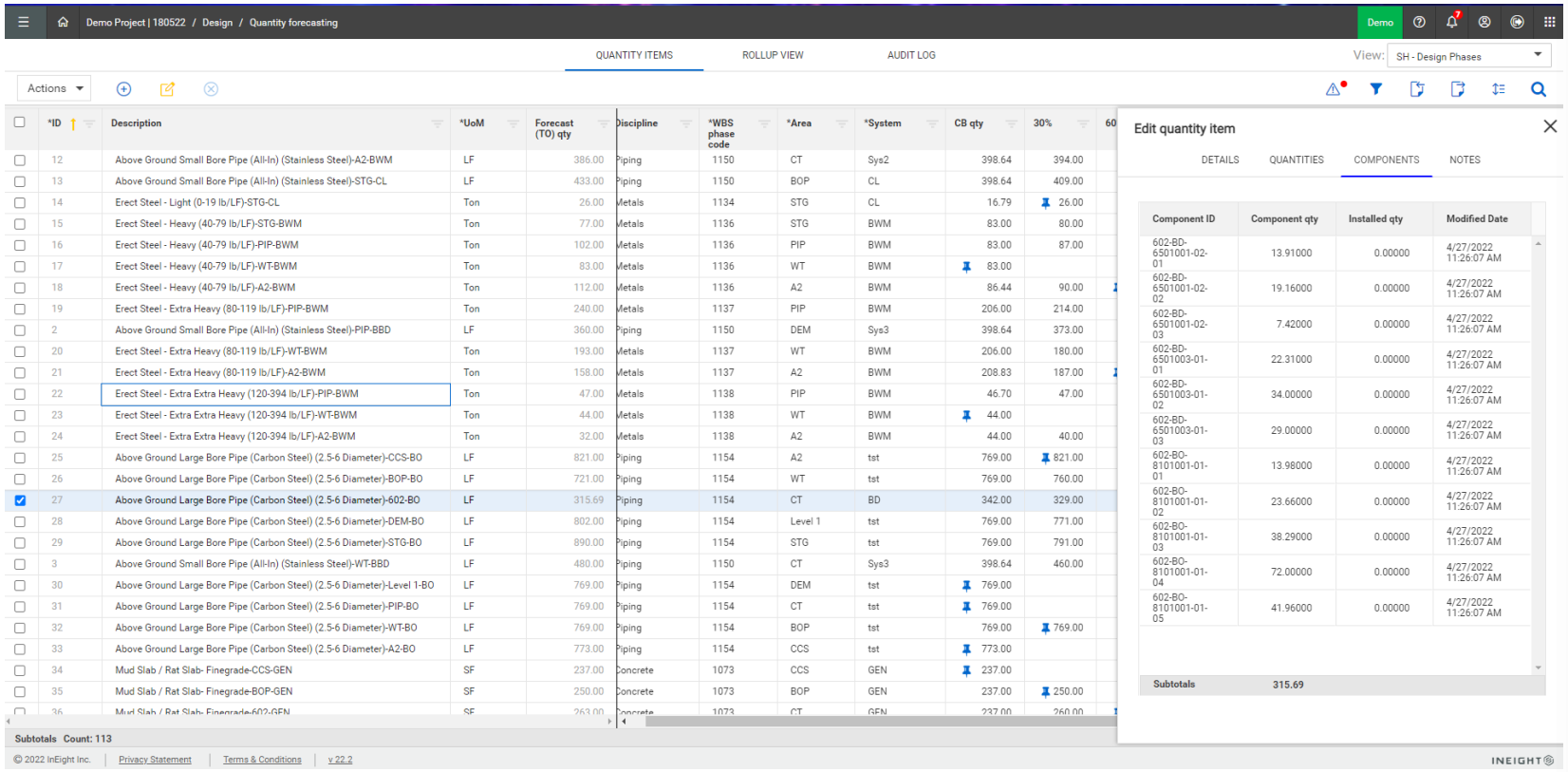
ONE SOURCE OF TRUTH

- ANALYTICS & REPORTING
- BILLINGS MANAGEMENT
- BIM/ DIGITAL TWIN
- CHANGE ORDER MANAGEMENT
- CONTRACT & PROCUREMENT MANAGEMENT
- COST BUDGETING & FORECASTING
- DESIGN MANAGEMENT
- DOCUMENT CONTROL & TURNOVER
- HEALTH, SAFETY & ENVIRONMENTAL COMPLIANCE
- EARNED VALUE MANAGEMENT
- ESTIMATING & PRICING
- FIELD DATA CAPTURE
- QUALITY MGMT, STARTUP & COMMISSIONING
- RISK MANAGEMENT
- SCHEDULING & SHORT-INTERVAL PLANNING
- WORK PLANNING & PACKAGING

INTEGRATED PROJECT CONTROLS

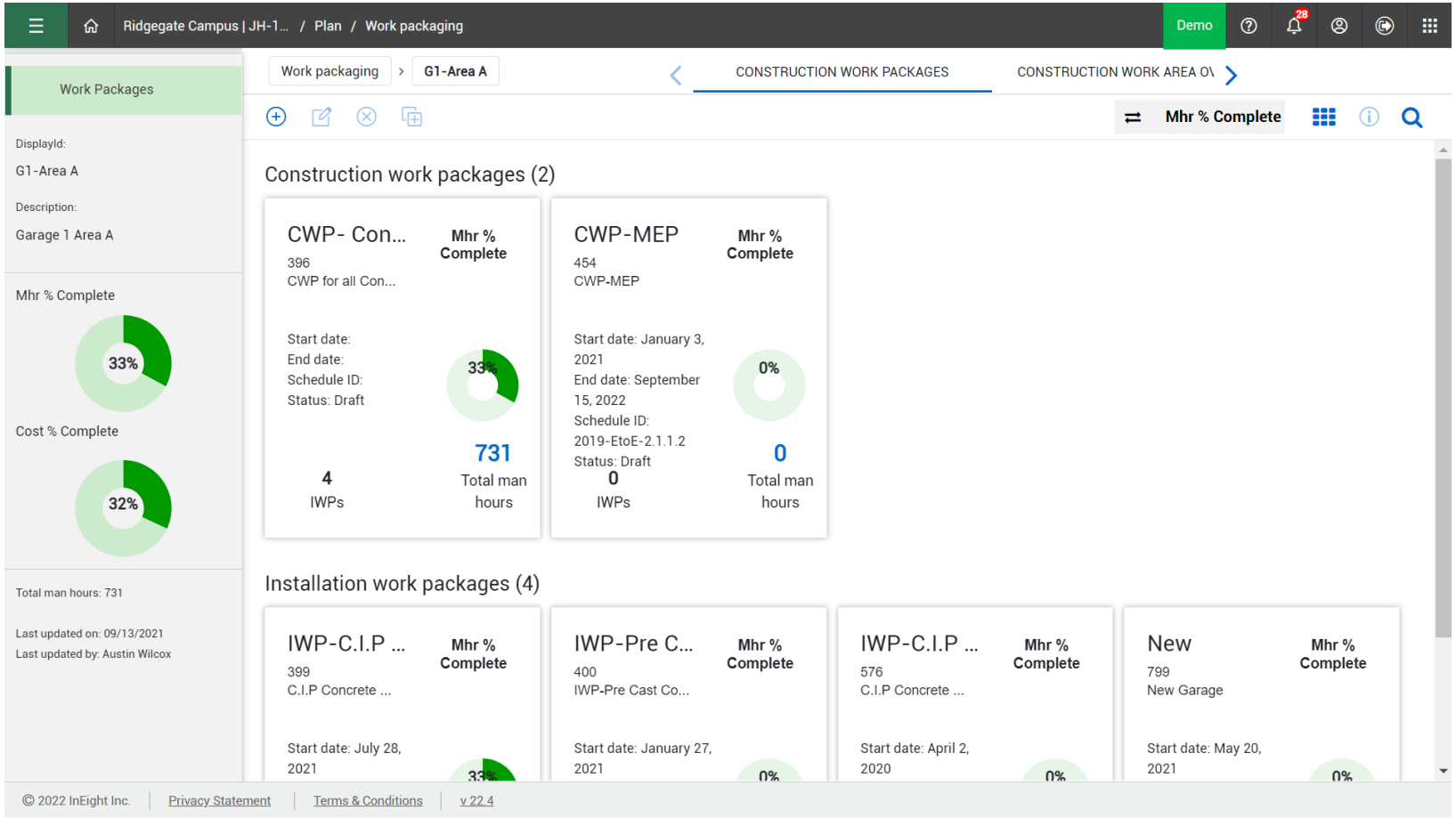


QUANTITY MANAGEMENT



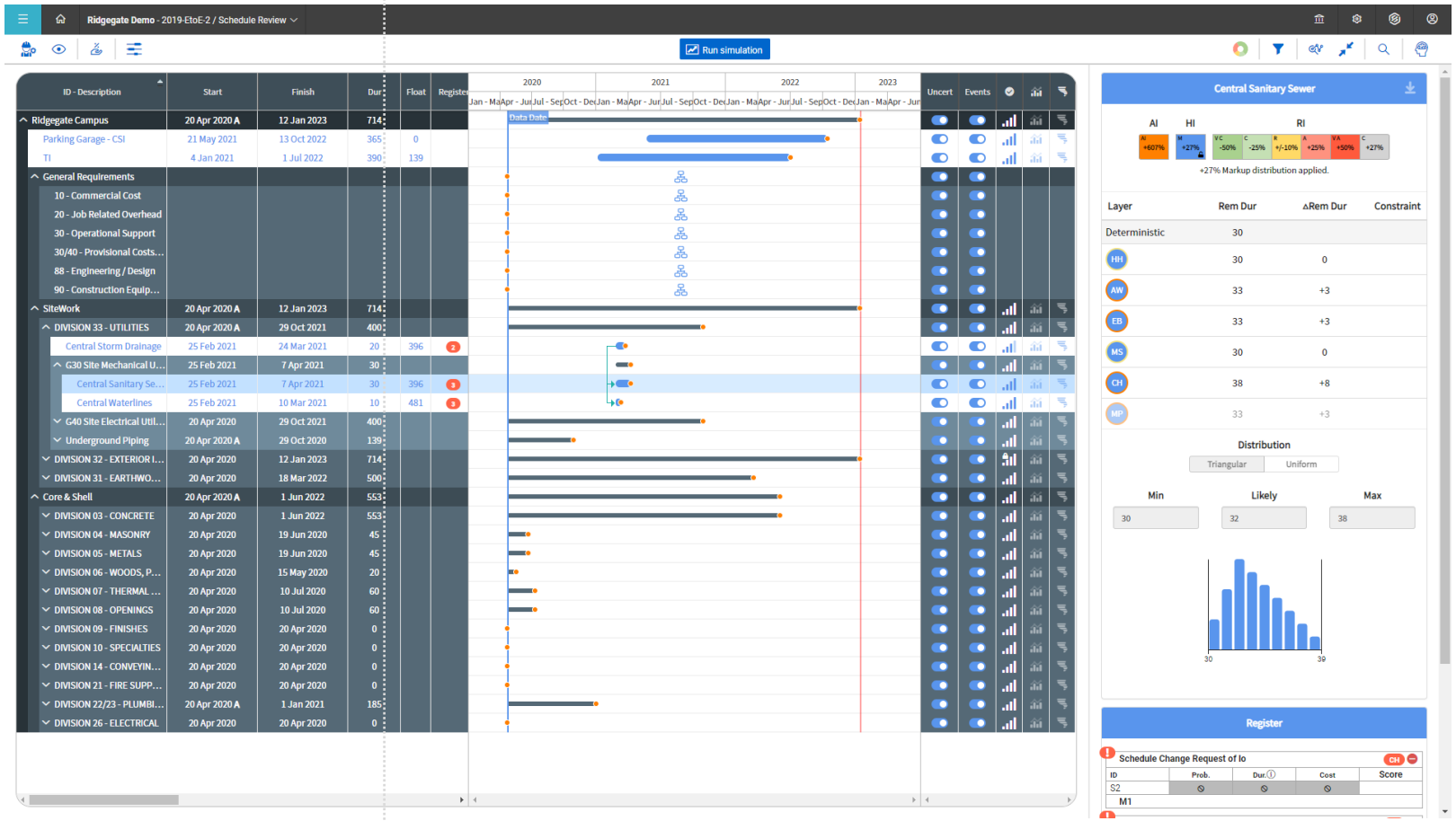
- Get full visibility across design and construction with a comprehensive project controls solution for design-build and progressive delivery projects

WORK PACKAGING



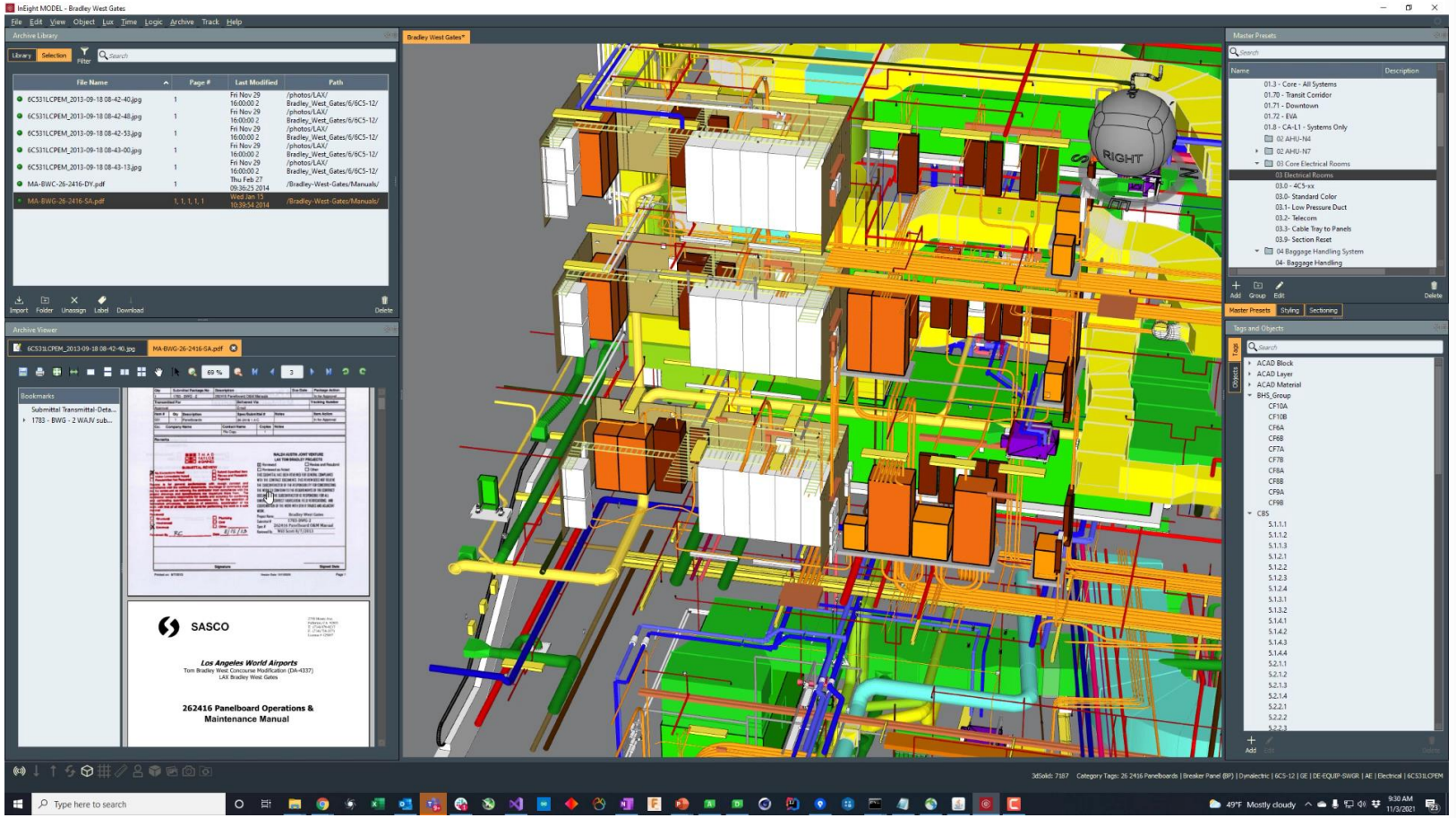
- Manage construction deliverables with an integrated work planning process that fits your team

SHORT INTERVAL PLANNING



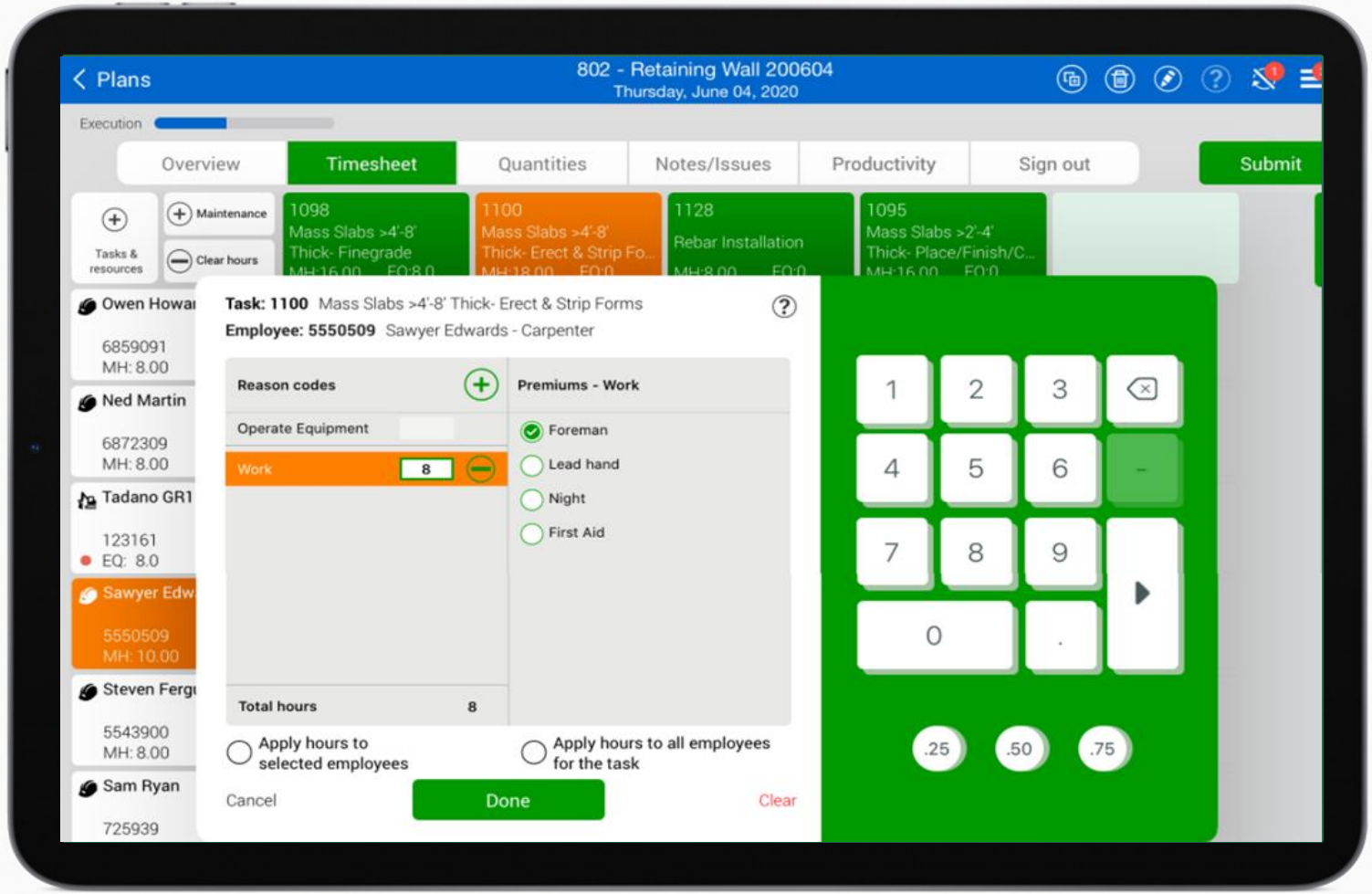
- Collaborate with subject matter experts on a single digital platform to identify risks and validate plans, leveraging their experience to improve planning certainty

WORK PLANNING & PACKAGING



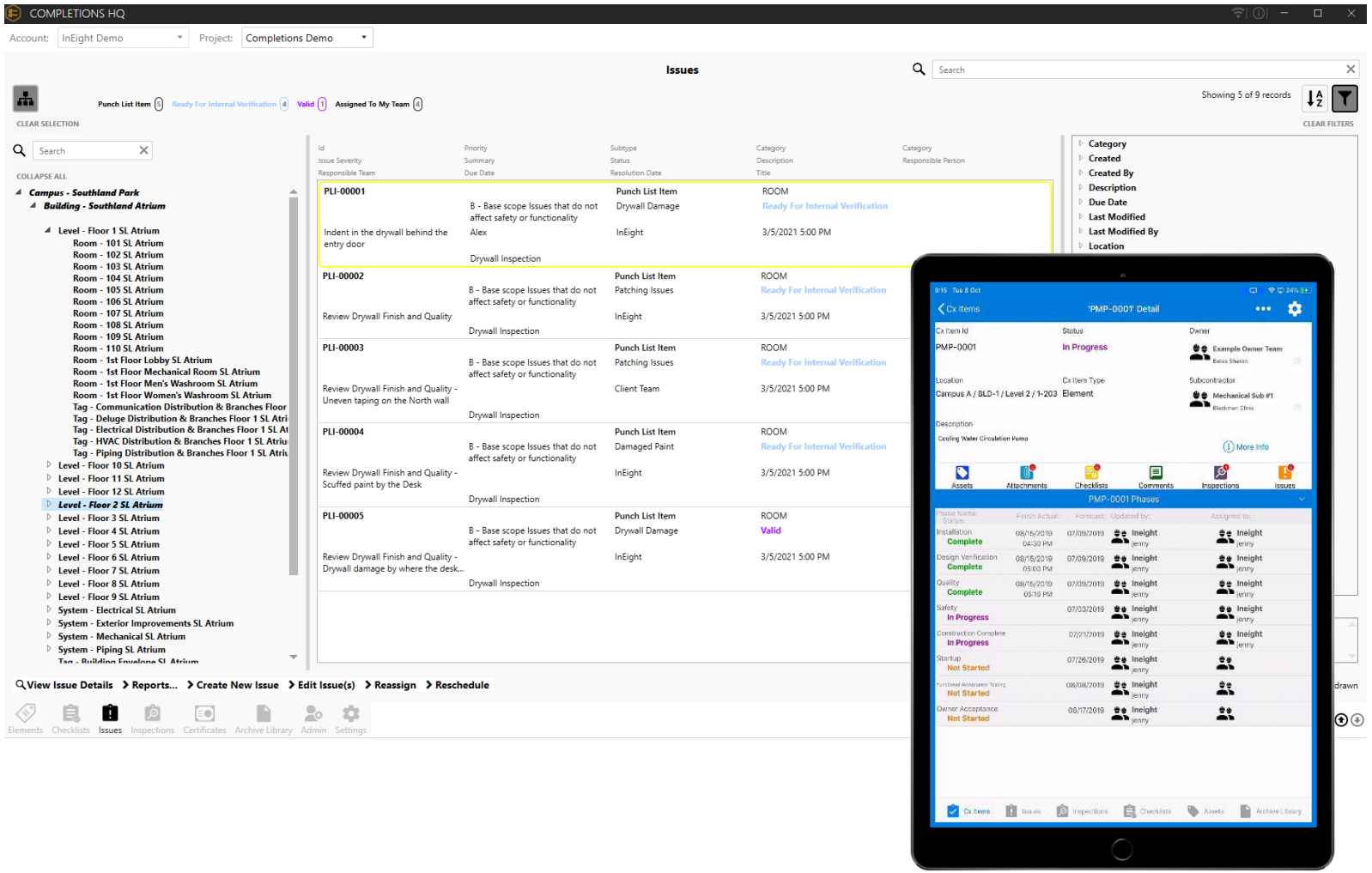
- Model elements are tagged with engineering and fabricator data
- Project Models are integrated with Earned Value System to allow for a visual check of claiming status

FIELD DATA CAPTURE



- Use electronic timesheets and automated reporting to increase field productivity

QUALITY, STARTUP & COMMISSIONING



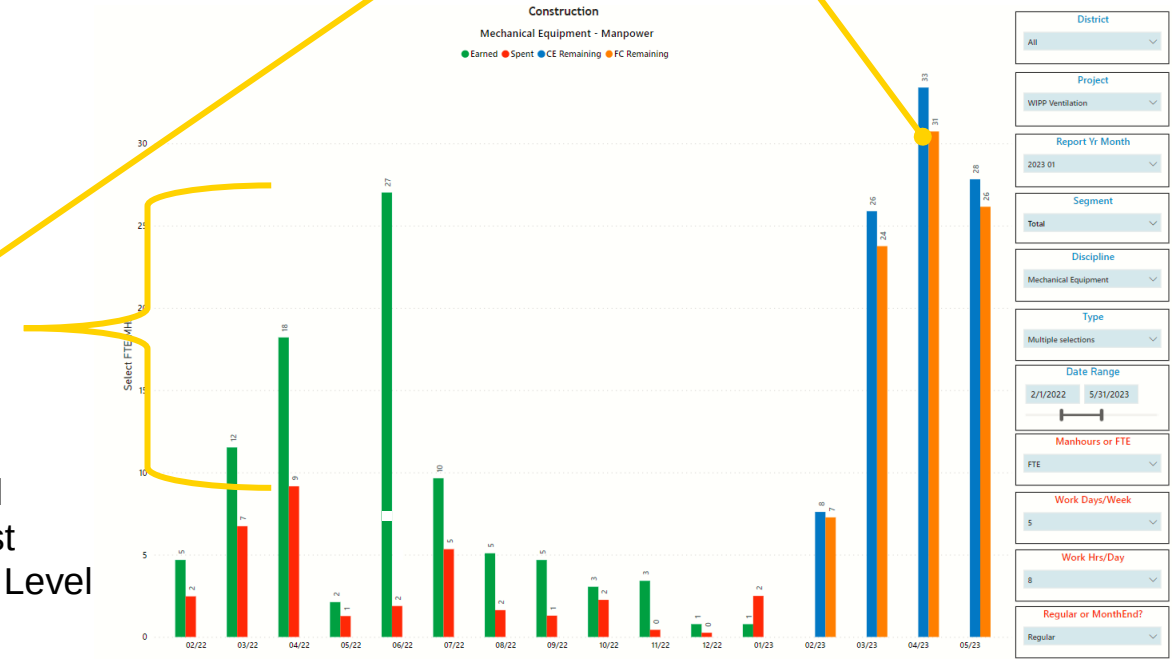
- Orchestrate commissioning and startup activities across stakeholders to ensure timely delivery of constructed assets

REAL-TIME DATA AND FORECASTING

Row Labels	WBS	Qty	MH	MH G/L	Earned MH	MHF	PF
MECHANICAL BOP	1325	54.69	6,375	8,477	14,852	116.57	2.33
PUMPS	1326	9.88	358	50	408	36.23	1.14
SHOP ASSEMBLED	1329	11.94	840	201	1,041	70.31	1.24
FIELD ASSEMBLED	1337	1.17	136	238	373	115.81	2.75
MISC EQUIPMENT SKIDS	1340	30.55	3,064	6,014	9,077	100.28	2.96
FANS	1347	5.37	1,837	2,005	3,842	341.99	2.09

FC PF > 1.0 = LESS FTES

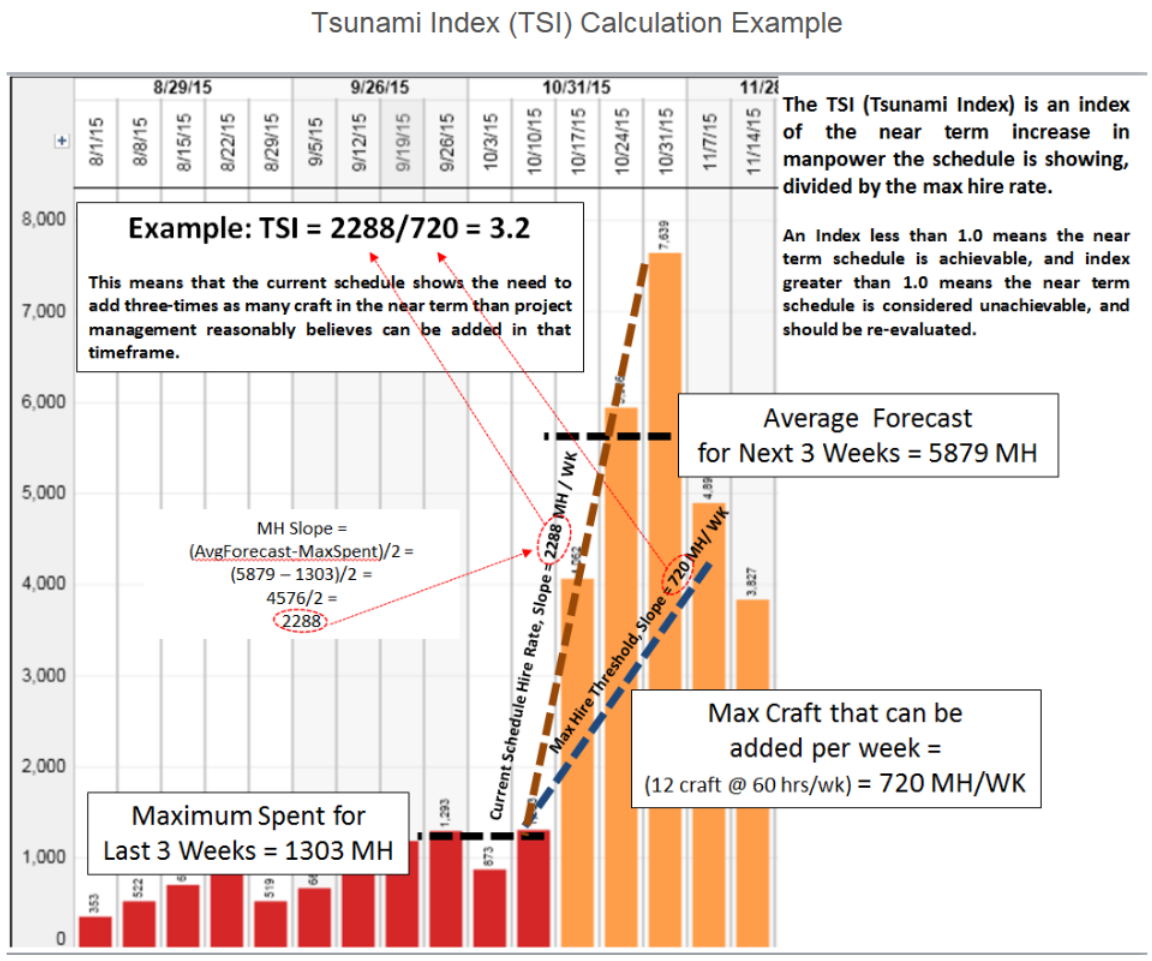
EARNED > SPENT = JTD PF > 1.0



JTD PF = Earned / Actual
FC PF = Budget/ Forecast
***At the Schedule Detail Level

- Updates remaining quantities weekly as design evolves.
- Leverages current labor production rates to forecast remaining labor hours tied to specific work scopes

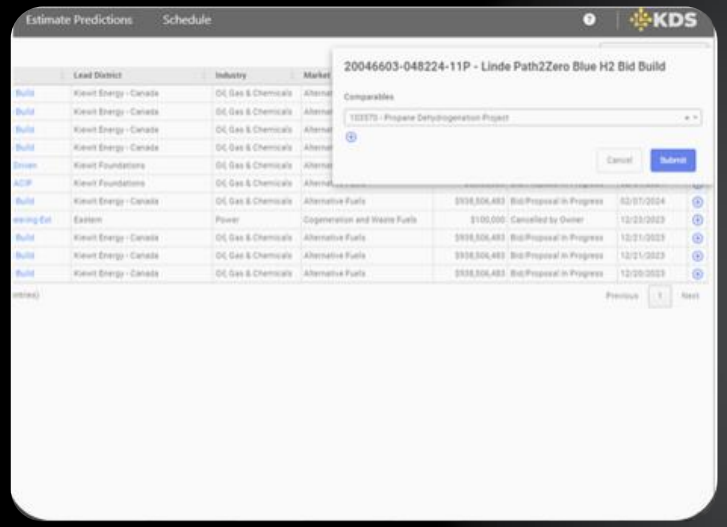
RISK MITIGATION SCHEDULE CERTAINTY



- Accurate forecasted remaining hours allows the team to evaluate how achievable short-term plans are factoring in resource constraints
- Project teams monitor health of short-term schedule plans by comparing forecasted remaining hours compared to actual spent hours

POWERED BY INEIGHT

PREDICTIVE ESTIMATING

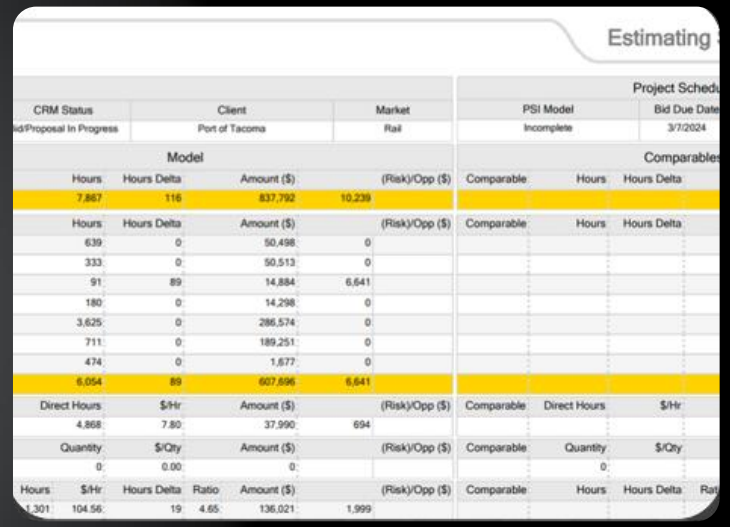


VISUALIZE PREDICTION

Left side of the estimate is MHF and right side is a line showing the trajectory of all predictions through quantities for a given estimate.

SELECT ESTIMATE

Near real time estimate data pulls from directly from InEight Estimate.



PDF SUMMARY

Summary show cases all predictions that algorithms think you should change.

INEIGHT RISK ANALYSIS APPROACH

SCHEDULE AND COST REVIEW

- Ensure Free-Flowing Logic
- Validate Structure

UNCERTAINTY CAPTURE

- Duration and Cost Realism
- Plan Confidence

RISK REGISTER SCORING AND MAPPING

- Probability
- Impact
- Mitigations

DEVELOP MODEL

- Uncertainty
- Risk Events
- Scenarios

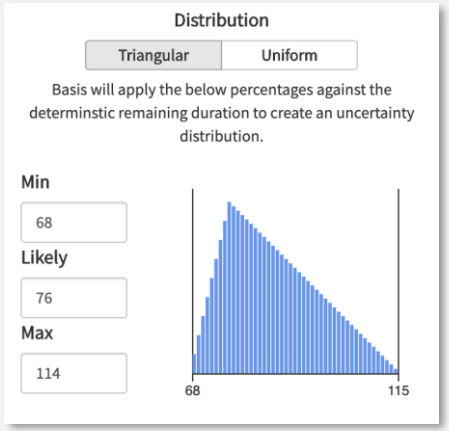
DELIVER AND REVIEW RESULTS

- Briefing
- Analysis
- Validation

ADJUST AND TRACK

- Revisits
- Risk Range
- Reflect Mitigation Status

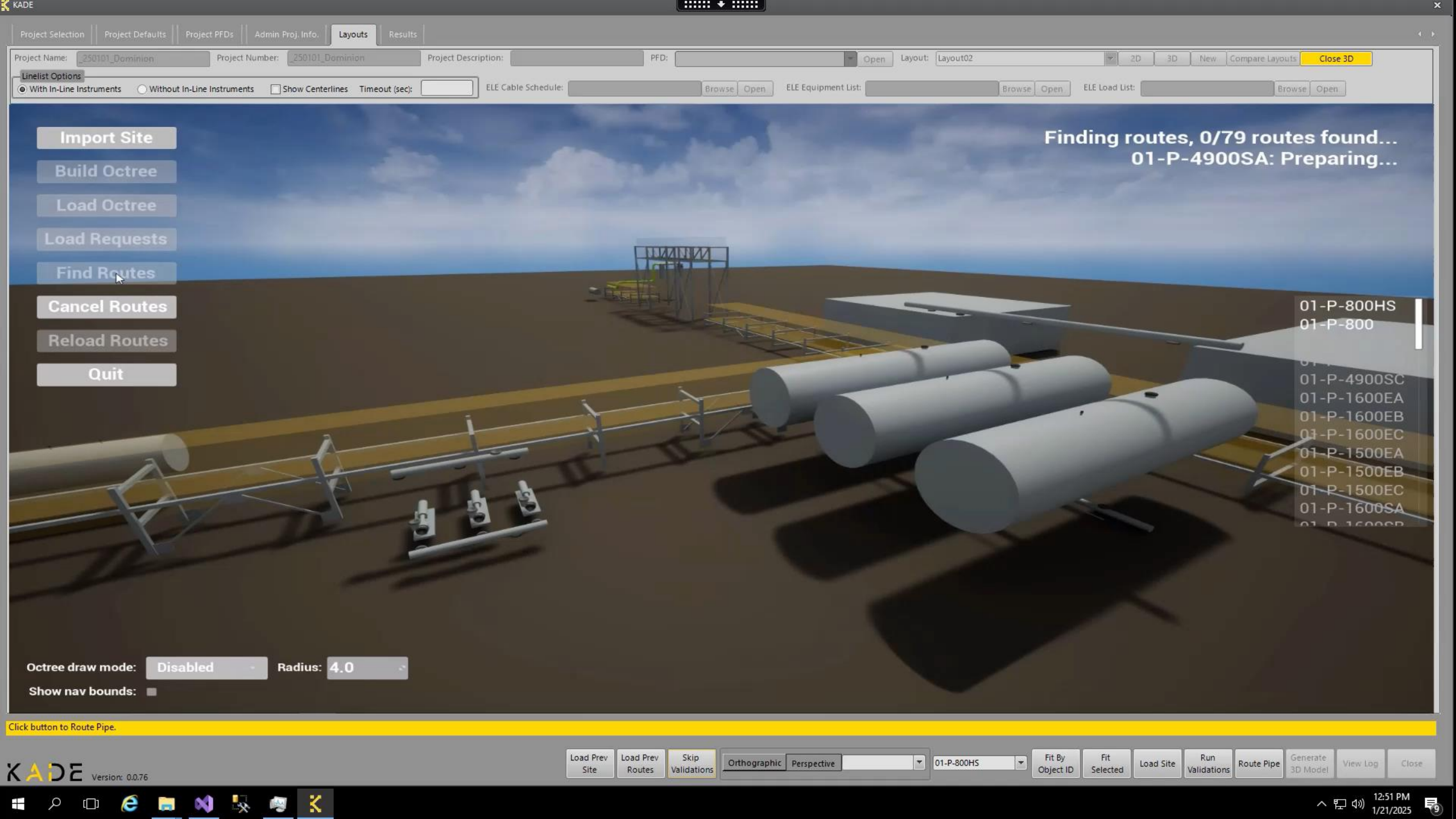
Assess Uncertainty (e.g., Qty Growth, Productivity)



Identify Risk Events (e.g., Discrete & Measurable)

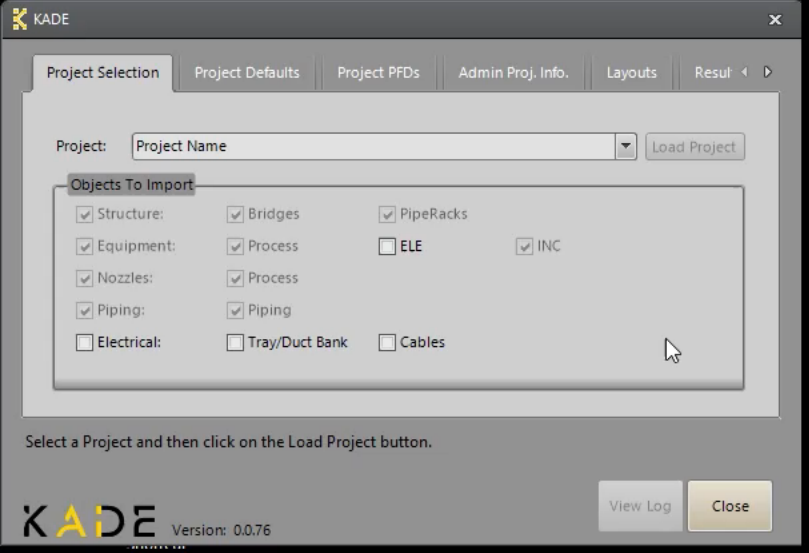
Active	Id	Type	Description	Mitigation	Probability	Schedule Impact	Cost Impact	Score
	R14	Risk	Expansion joints not designed for local temp fluctua		75%	60 days	$10,000,	20
	R6	Risk	Expansion joints not designed for local temp fluctua		75%	60 days	$1,000,0	16
	R13	Risk	Laydown constraints		75%	60 days	$100,00	12
	R4	Risk	Weld issues causing rework		50%	90 days	$100,00	12
	O1	Opportu	Order new COTS modules		50%	60 days		9
	R11	Risk	Risk of delay due to lack of designers resulting in ne		50%	60 days	$100,00	9
	R17	Risk	Scope poorly defined		50%	30 days	$100,00	9
	R2	Risk	Laydown constraints	Procure additional acreage adjacent to	50%	60 days	$100,00	9
	R1	Risk	Delays due to UXB		25%	60 days	$100,00	6
	R3	Risk	Unknown soil conditions		50%	30 days	$10,000	6
	R5	Risk	Local regulatory authority changing requirements		50%	30 days	$10,000	6
	R7	Risk	Site Access constraints		25%	60 days	$100,00	6
	R8	Risk	Risk of clashes due to pipe sizing resulting in rework		25%	60 days	$10,000	6
	R9	Risk	Risk of Quantity Growth due to late takeoff		25%	60 days	$10,000	6

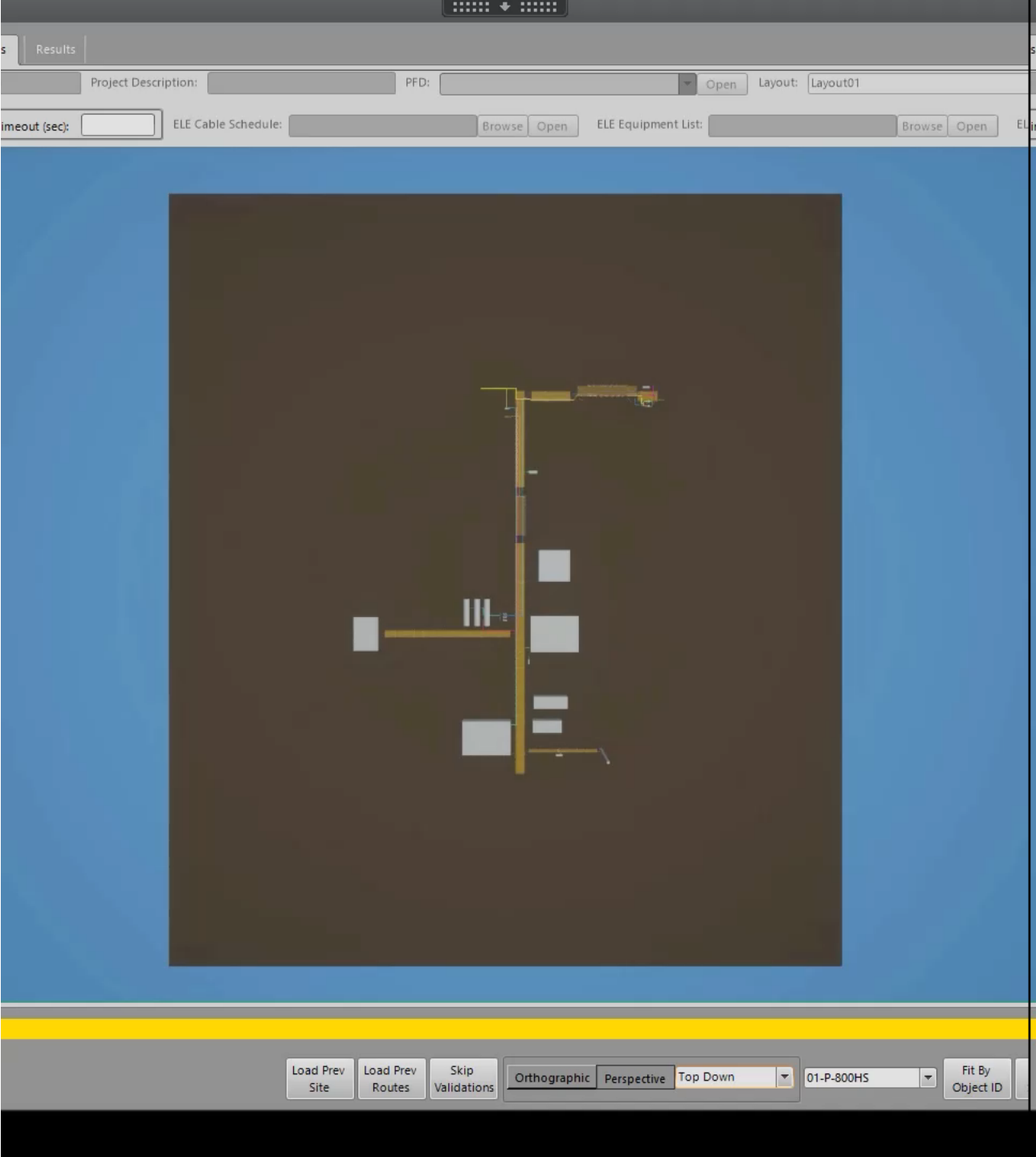

INEIGHT
KADE
ADAPT
Palantir
TRACE

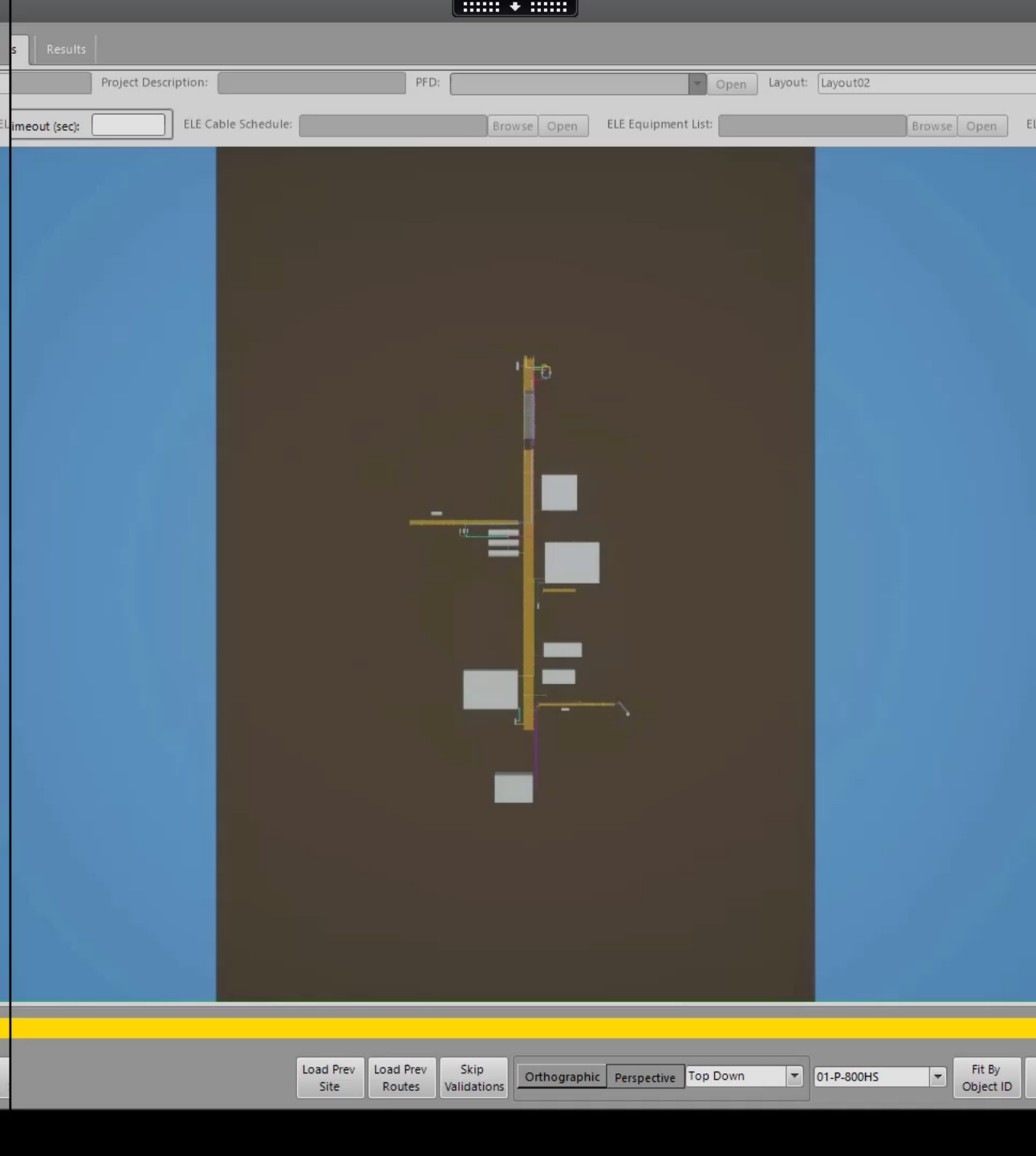

KADE
Project Selection
Project Defaults
Project PFDs
Admin Proj. Info.
Layouts
Results
Project Name:
_250101_Dominion
Project Number:
_250101_Dominion
Project Description:
PFD:
Open
Layout:
Layout02
2D
3D
New
Compare Layouts
Close 3D
Linelist Options
With In-Line Instruments
Without In-Line Instruments
Show Centerlines
Timeout (sec):
ELE Cable Schedule:
Browse
Open
ELE Equipment List:
Browse
Open
ELE Load List:
Browse
Open
Import Site
Build Octree
Load Octree
Load Requests
Find Routes
Cancel Routes
Reload Routes
Quit
Finding routes, 0/79 routes found...
01-P-4900SA: Preparing...
01-P-800HS
01-P-800
01-P-4900SC
01-P-1600EA
01-P-1600EB
01-P-1600EC
01-P-1500EA
01-P-1500EB
01-P-1500EC
01-P-1600SA
Octree draw mode:
Disabled
Radius:
4.0
Show nav bounds:
Click button to Route Pipe.
KADE
Version: 0.0.76
Load Prev Site
Load Prev Routes
Skip Validations
Orthographic
Perspective
01-P-800HS
Fit By Object ID
Fit Selected
Load Site
Run Validations
Route Pipe
Generate 3D Model
View Log
Close
12:51 PM
1/21/2025

5,000
HOURS

8
HOURS


KADE
Project Selection
Project Defaults
Project PFDs
Admin Proj. Info.
Layouts
Resul
Project:
Project Name
Load Project
Objects To Import
Structure:
Bridges
PipeRacks
Equipment:
Process
ELE
INC
Nozzles:
Process
Piping:
Piping
Electrical:
Tray/Duct Bank
Cables
Select a Project and then click on the Load Project button.
KADE
Version: 0.0.76
View Log
Close


Results
Project Description:
PFD:
Open
Layout:
Layout01
imeout (sec):
ELE Cable Schedule:
Browse
Open
ELE Equipment List:
Load Prev Site
Load Prev Routes
Skip Validations
Orthographic
Perspective
Top Down
01-P-800HS
Fit By Object ID


Results
Project Description:
PFD:
Open
Layout:
Layout02
imeout (sec):
ELE Cable Schedule:
Browse
Open
ELE Equipment List:
Load Prev Site
Load Prev Routes
Skip Validations
Orthographic
Perspective
Top Down
01-P-800HS
Fit By Object ID

INTEGRATION OF TOOLS

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