

Control the Chaos:

Create, Track, & Manage Work Packages in a Digital Environment

Purpose & Objective: Why Are We Here?

Learn from real-world client experience on how to
progress on your AWP journey from
from zero to full AWP Program Management



Agenda for Today

- Purpose & Introductions
- Safety Moment
- O3 Overview
- AWP Journey
- Case Studies – AWP Maturity Growth
 - Constraint Management
 - Entry Level Work Packaging
 - Data-Driven Work Packaging
 - AWP Program Management
- Key Takeaways
- Q&A Session



Speaker Introduction

Josh Girvin CEO

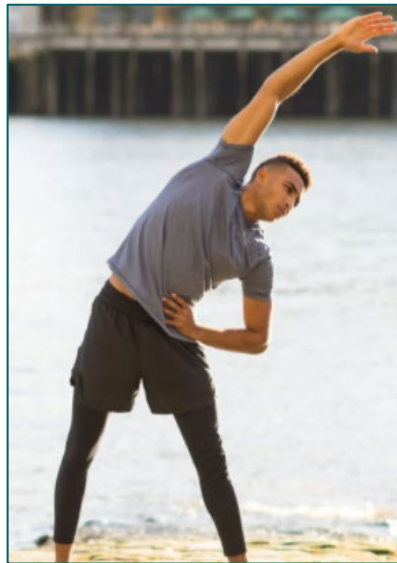
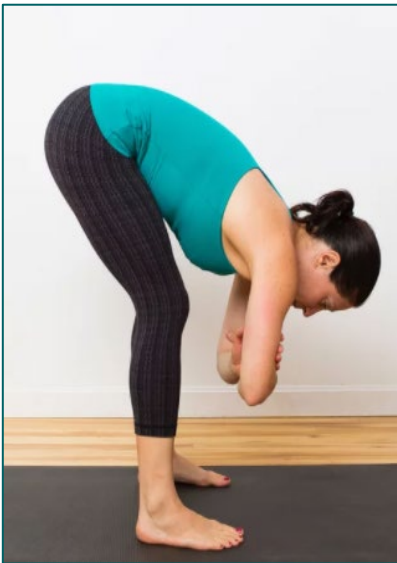
- CII AWP Community for Business Advancement
 - Performance & Benchmarking Co-Chair
 - Scaffolding Joint Working Group Co-Chair
- CII Technology Committee Member
- Former SVP Product & Market Strategy for Materials Management / RFID Software
- 12 Technology Patents
- BSE Mechanical Engineering



⚠ SAFETY MOMENT

SPINAL FLEXIBILITY: Take a BLT Break

Spinal flexibility can prevent injury & decrease pain / discomfort



No matter your fitness level:

- Move your spine in every direction (all 3 planes of motion)
 - Remember BLT!
 - Bend forward
 - Bend backwards
 - Lean left
 - Lean right
 - Twist left
 - Twist right
- Stop once you feel sensation
- Breathe deeply to relax
- Use the floor or a wall for support if needed
- Remember to move FROM your spine: not your head or neck

Having good flexibility may help to reduce stiffness, prevent injuries, and maintain good range of motion in the joints.

– CDC

Why Stretching is Even More Important during the Pandemic

– Washington Post





WHO IS O3?

O3 is a **modern web-based platform** that leverages **Advanced Work Packaging** and **Agile** best practices to disrupt the status quo for companies in **industrial construction** who want to improve productivity, safety, quality, and predictability.



O3 SOLUTIONS

Turn ON
the Power of O3

Sample O3 Experience



Change Management

Managing enrollments and certifications for 4,500+ users across 75+ courses



Collaboration

Supporting 3,500+ users across 30+ contractors on \$70B Oil & Gas project



Automation

Connecting 38 data threads across 6 systems to manage data for LNG Project



Scalability

Managing portfolio of 50+ small cap projects across 7 offshore assets



Optimization

Driving Owner engagement from concept through commissioning



Construction
Industry
Institute®



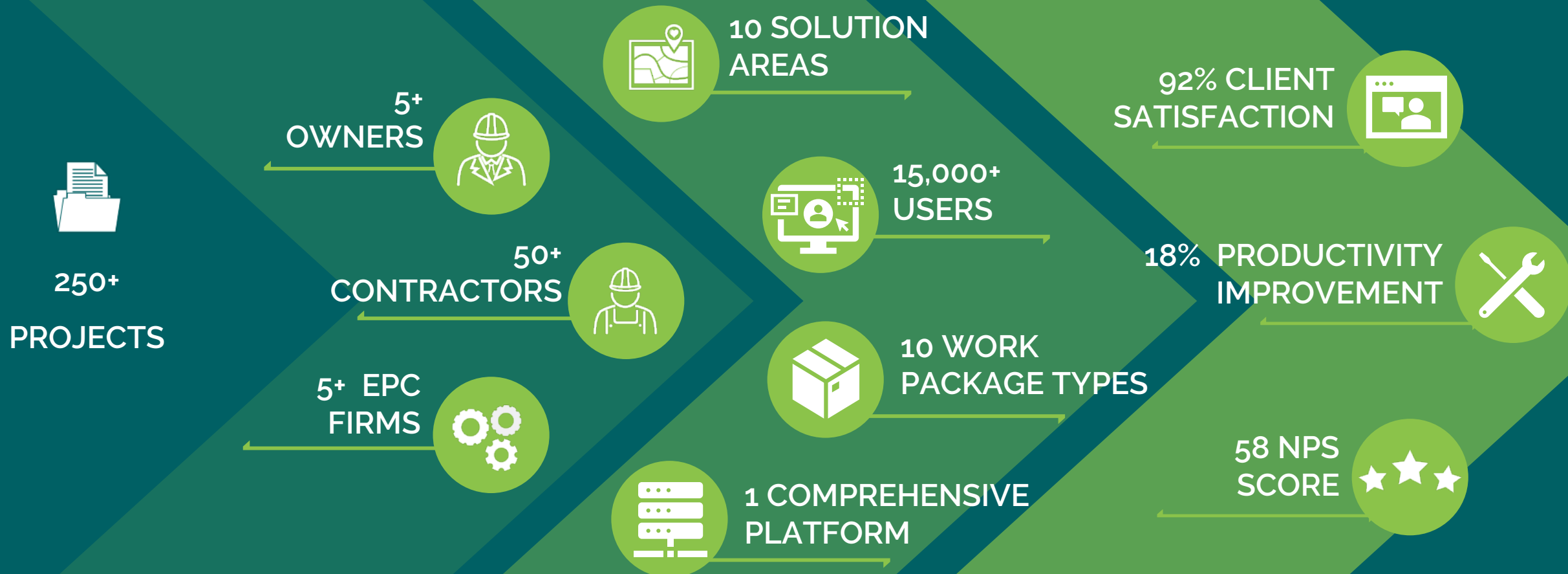
Advanced Work Packaging
Conferences and Summits
Organized by Group ASI • Content Developed by Industry



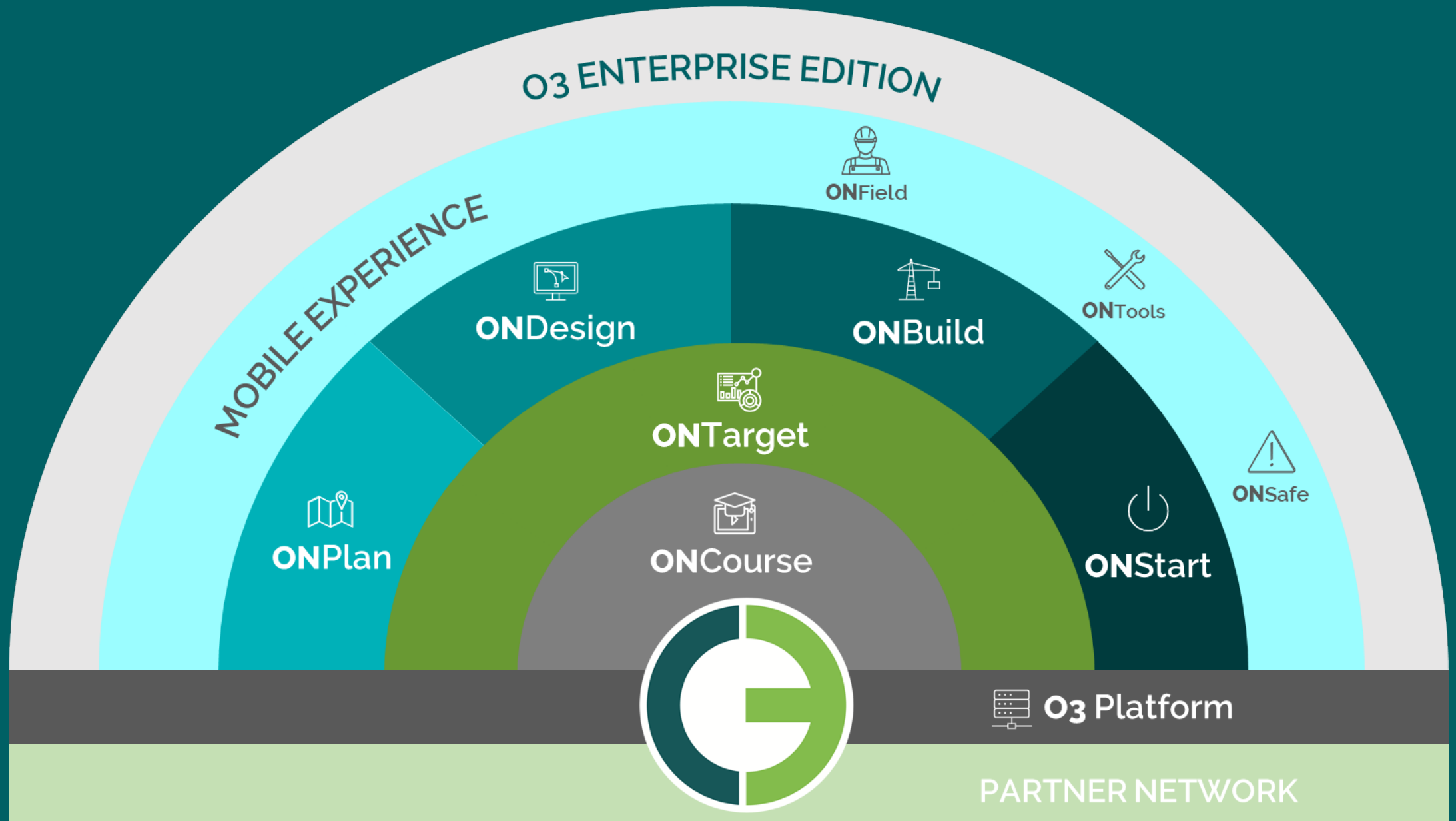
Fiatech™
Innovation that builds the world.



BY THE NUMBERS



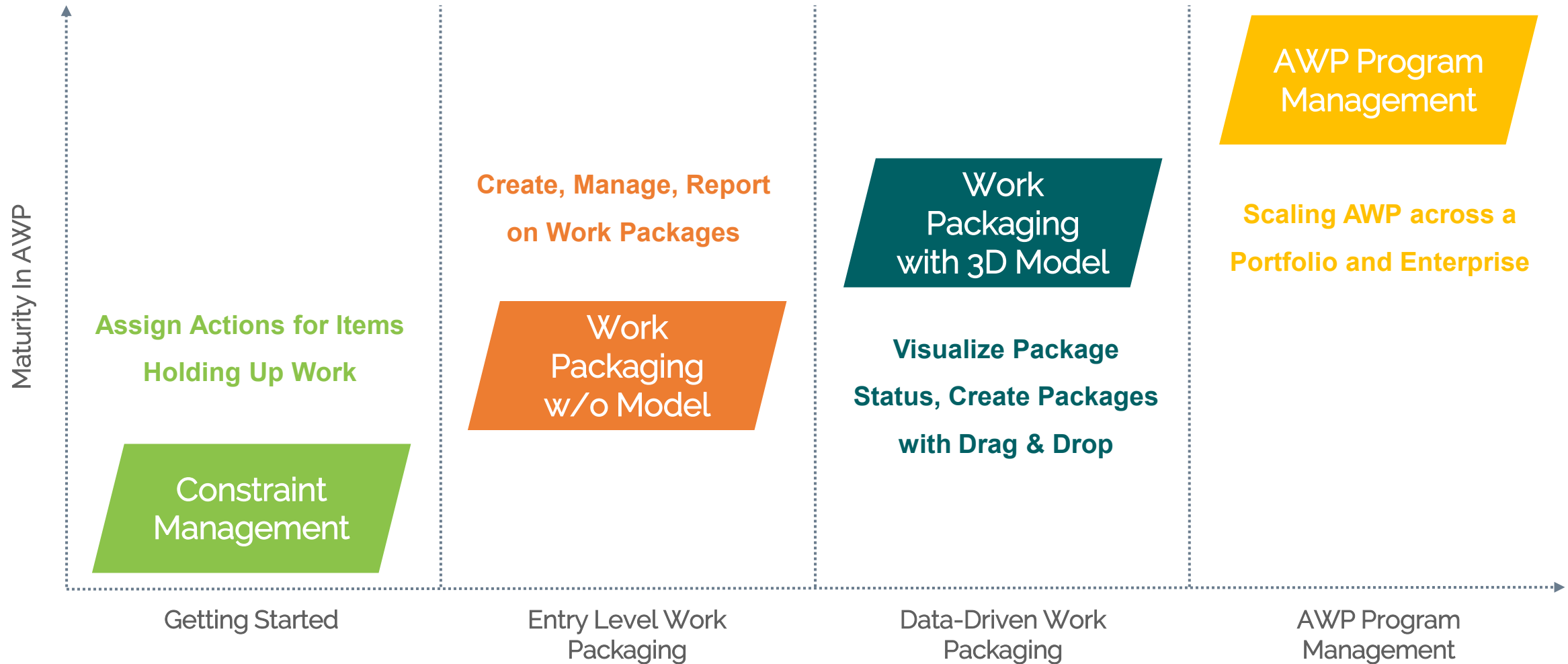
O3's SUITE OF SOLUTIONS



AWP Journey

AWP Journey

Expanding Your Technology to Adapt as You Mature in AWP Knowledge & Processes



Case Studies

CASE STUDY

Constraint Management

AWP Constraint Management

- \$70B Gigaproject
- Joint venture between 4 companies
- The largest single-train oil/gas separation facility
- A first-of-its-kind high-pressure/high H₂S gas re-injection facility

Challenges

- 50 contractors with individual means of managing constraints
- Multiple languages across many local non-AWP mature contractors



Constraint Management

- Collaborative constraint management process across 50+ Contractors
- Weekly Constraint Review Meetings run out of O3
- Consuming IWP data from a 3rd party tool that cannot provide sufficient constraint management
- Monthly management reports generated out of O3

"O3 makes it easy to see constraints that are at risk and keep our project on schedule. This includes automating constraints to track document completion and material availability! "

- AWP Manager

"Without a tool to manage all our constraints across multiple contractors, we would not be able to perform this predictably. I cannot imagine doing this manually."

- Senior Construction Engineer

True Constraint Management Across Contractors

50+
Contractors
in O3

259,000+
Constraints
Created

50,000+
IWPs
Created

3,500+
Trained
in AWP

4,000+
O3 Users
at Project

Weekly Constraint
Review
Meetings





Benefits

- Visibility into over 260,000 constraints across 50,000 IWPs
- Ability to have over 4,000 constraint management owners directly access the tool versus a few key users



Lessons Learned

- Develop Super Users and Project Admins to act as Level 1 tool & process support
- Deliver uniformed training & expectations for ALL contractors versus one-off processes



Next Steps

- Involve Commissioning & Start-up Teams in constraint management process
- Creating & Manage Turnover Packages in O3

CASE STUDY

Entry Level Work Packaging

Operating Asset

- Active Projects: 36
- Total Projects: 80
- 2,300 acre refinery & chemical plant
- 4 billion gallons of crude oil & products managed annually
- 1,500 Employees
- Oldest parts of the facility date back to the 1920s

Challenges

- Engrained processes
- AWP immature contractors
- Less sophisticated project systems with limited data sharing capabilities



Constraint Management

- RFIs - Transitioned from spreadsheets and email to digital management & automation
- Materials - Automatically creating constraints as part of material analysis
- Scaffolding – Cross-discipline review of scaffolding requirements and automated constraint creation

Non-Graphical Package Development

- CWP & IWP using engineering & materials lists
- Drawings pulled in from integration to DMS
- Auto-populating material requirements on IWPs

Progress Measurement

- Realtime visibility into the progress of IWPs and hours earned vs. original estimated hours

“I was able to evaluate the overall status of the project, highlight that engineering has continued to slip, and ultimately is impacting construction.

I advocated that construction start needed to push a month . . . [to] allow engineering to catch up and create a backlog of constraint free work.

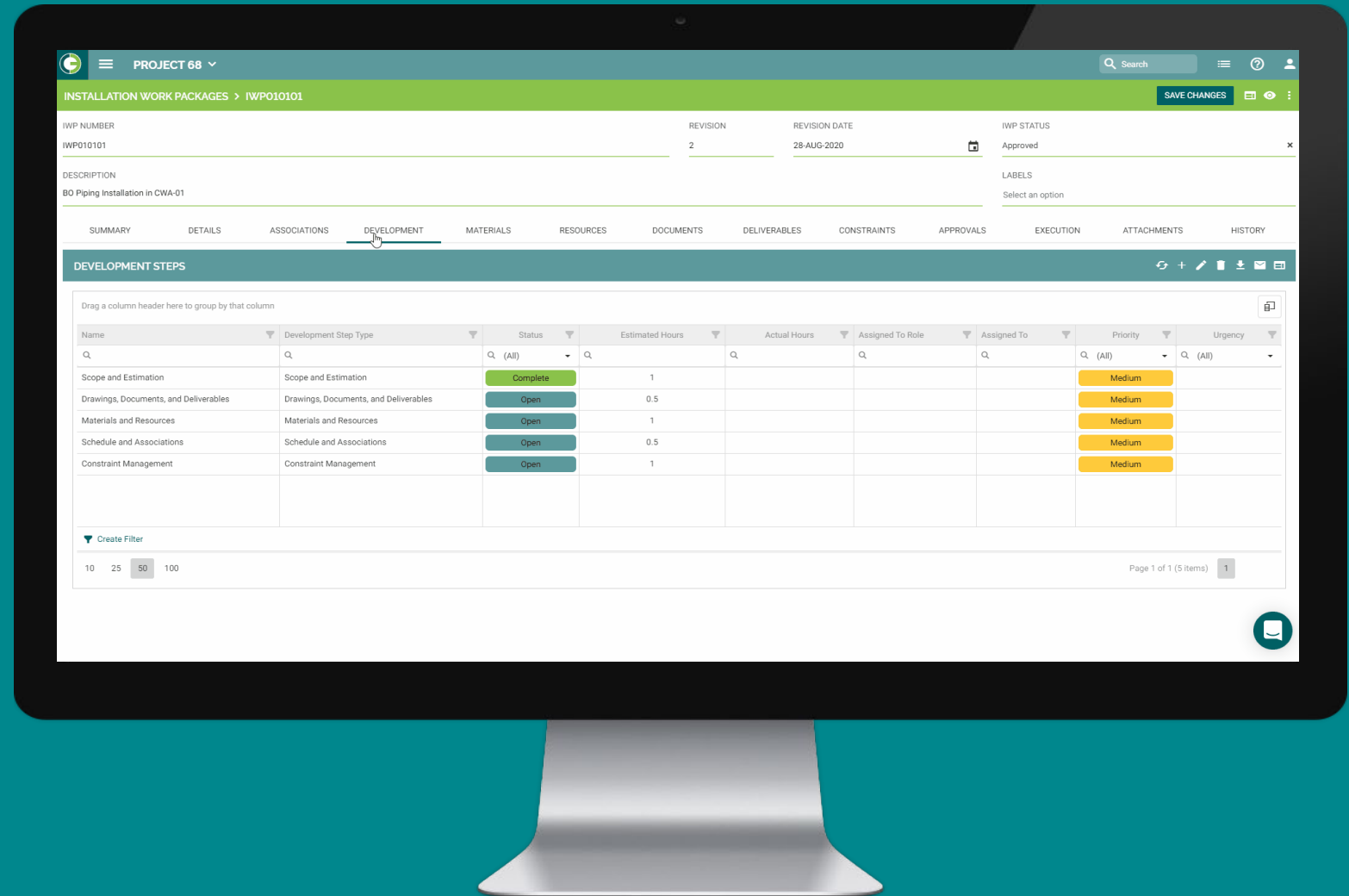
Not an ideal situation, but we had the data to support the decision.”

- Construction Manager

WorkFace Planning WITHOUT a 3D Model

Project Snapshot

- Active Projects: 36
- Total Projects: 80+
- 1,135 Construction Work Packages
- 1,890 Installation Work Packages



Proven Results

- Client is managing **15** small cap projects
- Documented a **9%** decrease in cost of O3 projects over non-O3 projects

20%
productivity
improvement of
over non-O3
projects





Benefits

- 20% increase in field productivity of AWP projects over non-AWP projects
- Enhanced visibility, collaboration, and accountability



Lessons Learned

- Change Management at operating facilities is particularly challenging due to institutional inertia
- Engineering tends to be the least motivated to change



Next Steps

- Graphical creation and visualization of packages
- Mobile access to IWPs in the field
- Expansion of Engineering Work Package utilization upstream of construction

CASE STUDY

Data-Driven Work Packaging

Operating Asset

- Expansion of existing gasification complex on Jurong Island
- \$1.4 Billion TIC expansion project to include 4 additional gasifiers

Challenges

- Construction Contractor unfamiliar with WFP
- Construction Contractor with limited English proficiency



Graphical Package Development

- CWP & IWP development using both 3D model components and engineering & materials lists

CWP & IWP Management

- Development and workflow management of construction and installation work packages

Constraint Management

- Collaborative constraint management process across contractor and owner

“In a single day, I was quickly able to create 60+ packages for underground piping.”

- Lead AWP Coordinator

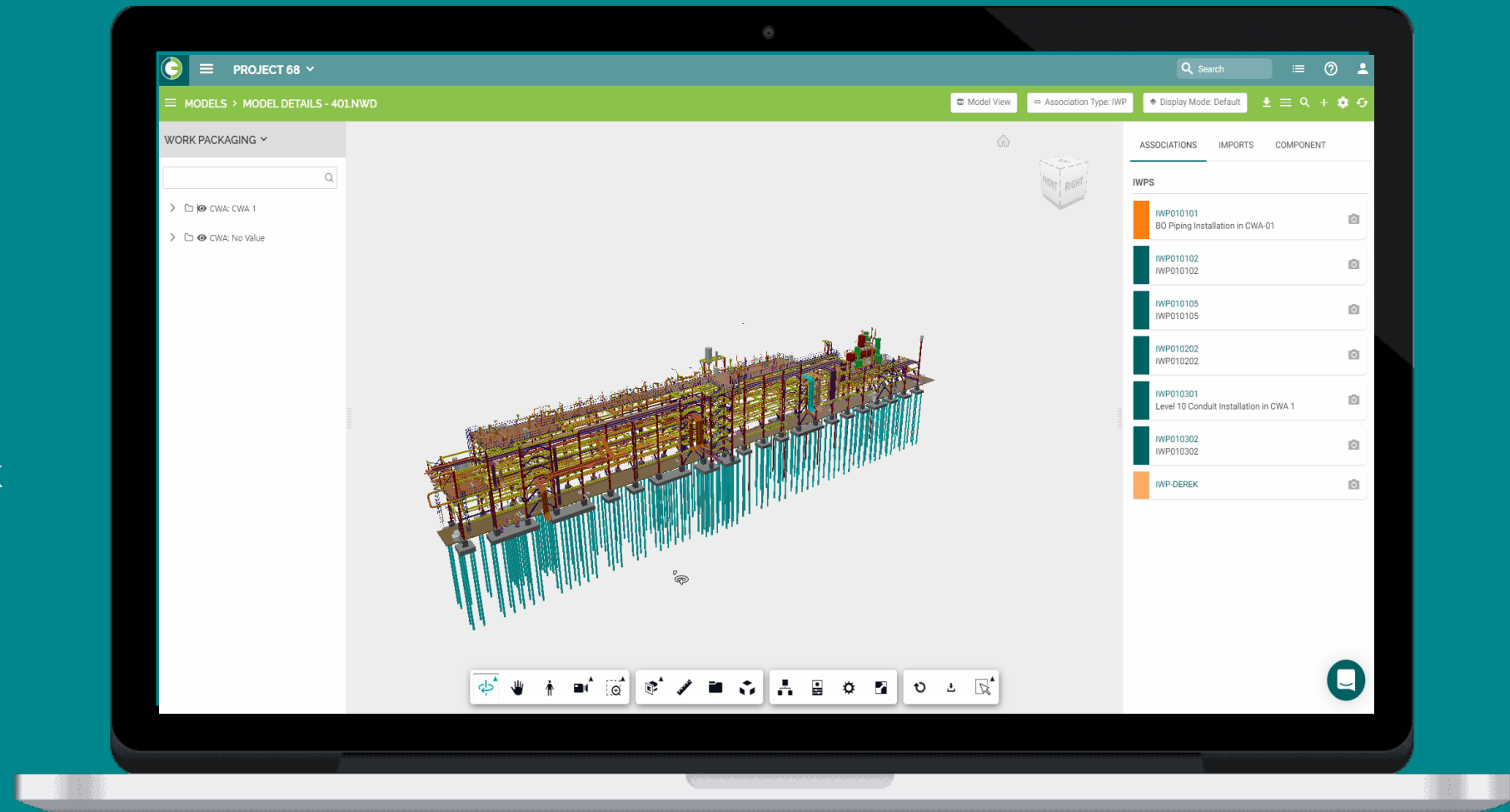
“Our contractors are loving the use of O3 to enhance our AWP process. The graphical interface shows what work is constrained and what is ready to be executed.”

- Construction Manager

AWP & WorkFace Planning with a Model

Project Snapshot

- Active Projects: 1
- Focus on Structural Steel & Piping for graphical work packaging
- 1,800+ Construction Work Packages
- 900+ Installation Work Packages





Benefits

- Ability to quickly & easily create IWPs with proper data attributes
- Ability to click into the model for CLEAR Visibility into package status & readiness
- Provide visual references for work packages in construction & engineering meetings



Lessons Learned

- Engage contractors early with WFP data requirements
- Engage contractors early with new WFP processes
- Translate client-specific training modules



Next Steps

- Onboard additional disciplines for graphical work packaging: Mechanical, E&I
- Implement data integrations to streamline WFP processes (reduce manual imports)

CASE STUDY

AWP Program Management

Offshore Portfolio

- 8 assets
- 114 Projects
- Produces 150 Million barrels annually
- 1,600 employees
- Portfolio to grow more assets & deep water projects

Challenges

- Aligning multiple offshore platforms on a new process & tool
- Coordinating AWP training across all users with 2-week shifts considerations



Work Package Creation and Management

- Development and workflow management of work packages

Constraint Management

- Collaborative constraint management process across contractors and owner

AWP Training & Certification

- Self-paced, online training for AWP and WFP

Productivity Measurement

- Field data collection and reporting of time on tools data

“We’ve already added significant visibility to gaps in our delivery as an organization as well as individual projects.”

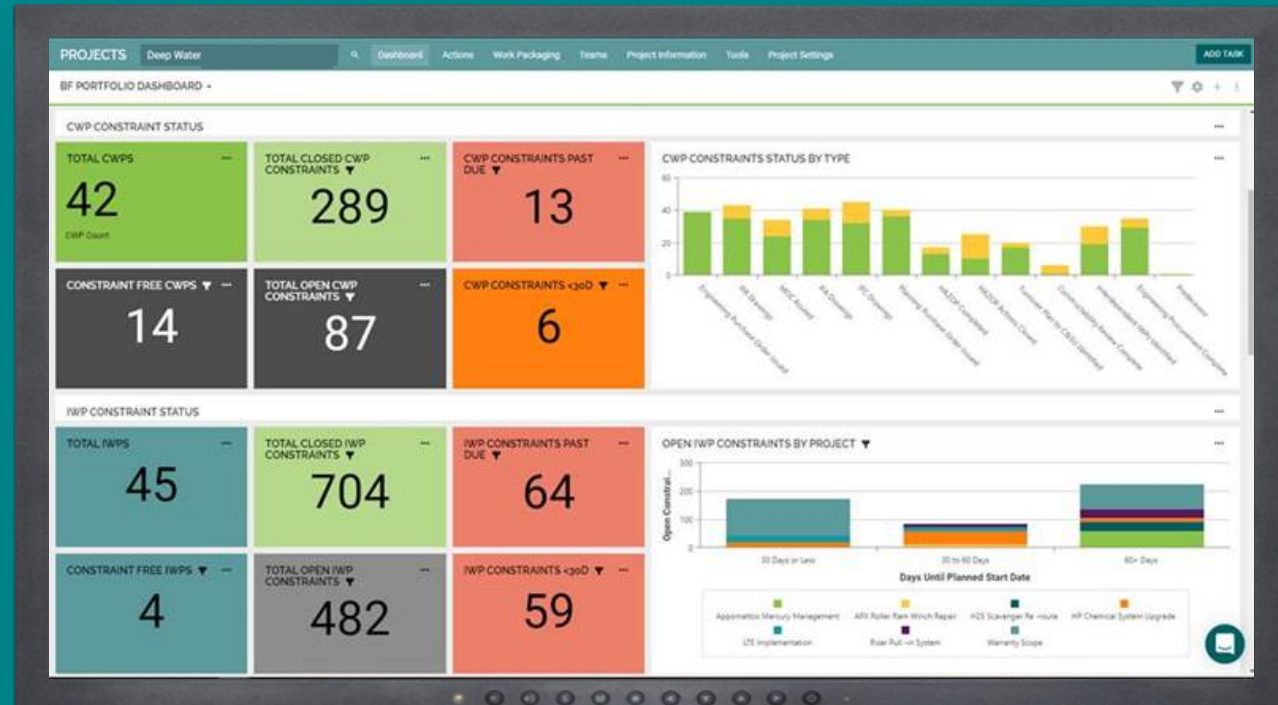
I’m very pleased with the capabilities of the system, responsiveness of the team, and the structure of implementation that O3 has managed.”

- Project Manager

Program Management with Cross Project Reporting & Analytics

Program Snapshot

- Active Projects: 114
- 460+ Construction Work Packages
- 1,020+ Installation Work Packages



“Having these dashboards not only allows the team to be reactive to past due items but has also allowed us to be proactive by clearly highlighting constraints on upcoming work.”

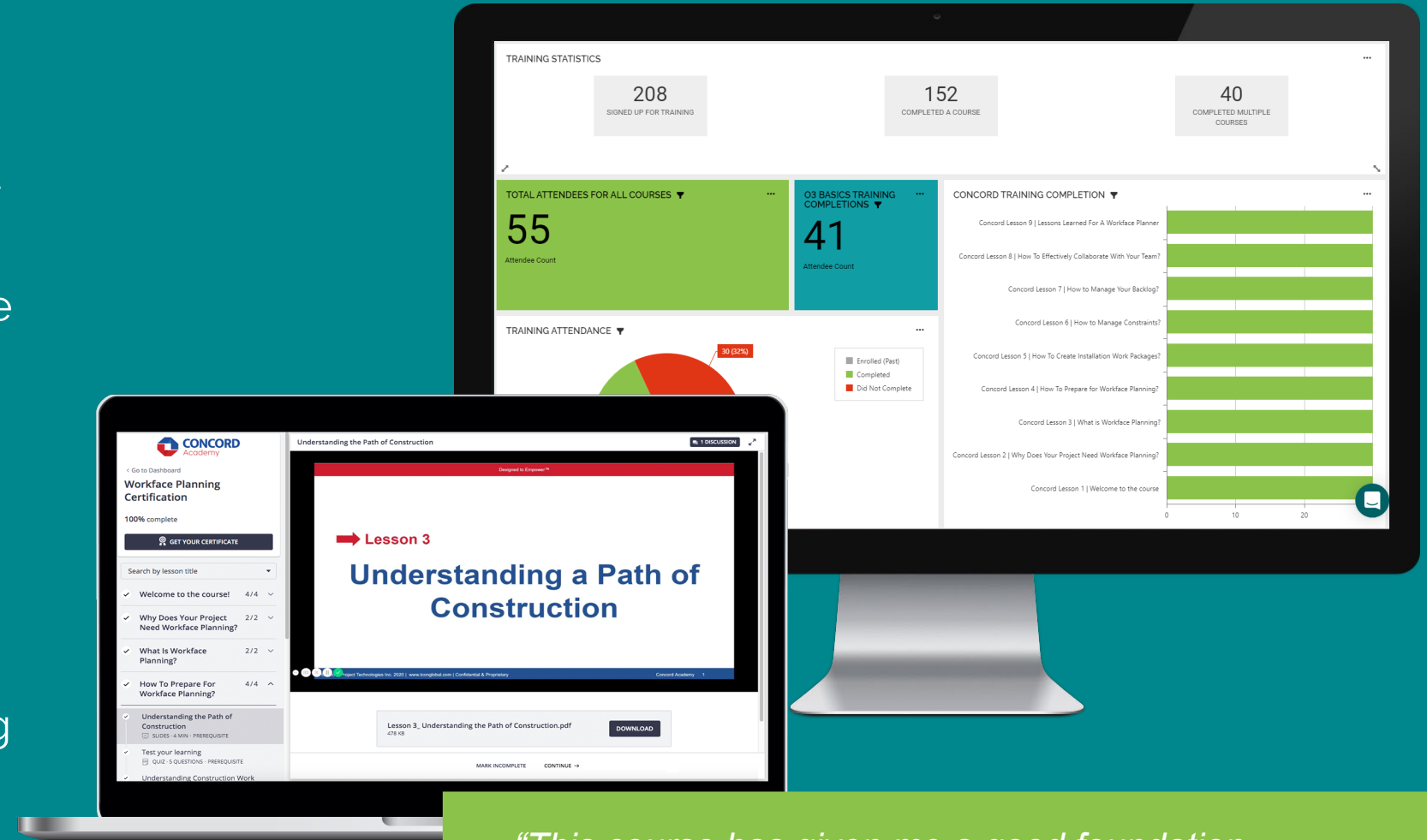
“Prior to using O3, data was tracked in a spreadsheet and communicated via email .”

Online, Self-Paced Training

- 40 Workers Completed Full Course
- 152 Completed at Least One Course
- Average Time to Complete – 2-3 Days

Training Management

- Dashboard to Track Training Completion
- Training Goals



“This course has given me a good foundation to build my planning skills on and a better understanding of what a key importance a good planner brings to a project.”

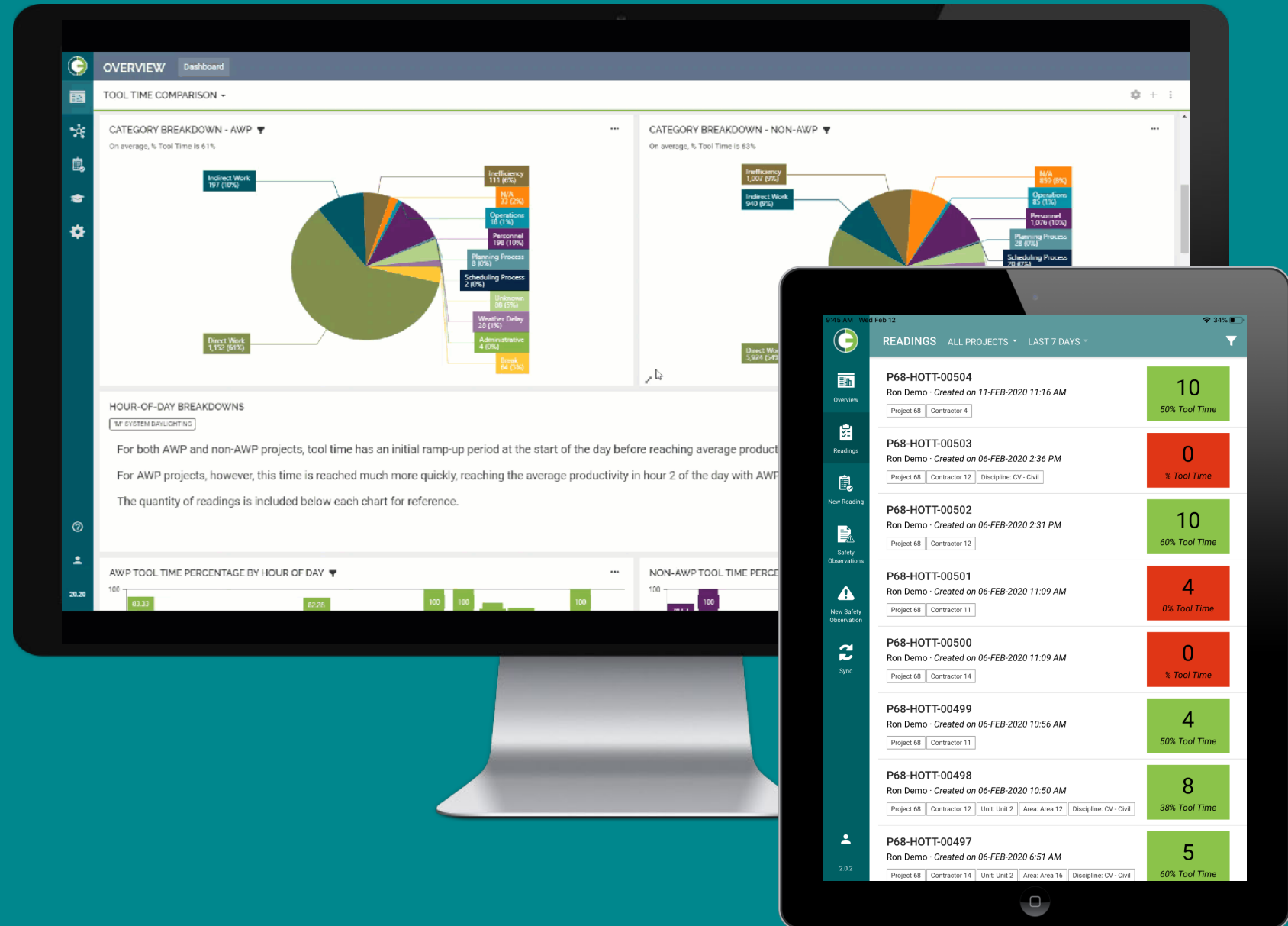
- Construction Planner

Real-time Cross-Project Dashboards

Sample Productivity Overview

Program Snapshot

- Total Projects: 250+
- Total Observations: 118,000





Benefits

- Standardization of approach across 100's of small projects
- Consistent definition of progress across contractors
- Real-time project status visibility allows for optimization of limited offshore resources
- Reduced safety concerns with online training
- Apples-to-apples productivity comparison across projects



Lessons Learned

- Moving to full AWP adoption as quickly as possible reduces team confusion
- Small projects can be managed as CWPs rather than individual projects to reduce overhead effort
- Project nuances require a productivity tool that is flexible and supports configuration



Next Steps

- Incorporation of mobile for access to Installation Work Packages in the field
- Leverage O3 training and certifications to track all training
- Extend productivity data to 3D status visualization

Key Takeaways



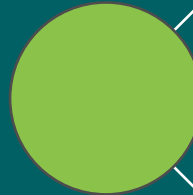
AWP is a Journey



AWP Master Index &
Work Packaging Can Be
a Single Tool



Constraint Management
alone is Valuable



Rollout Program Quickly
Post-pilot to Avoid
Confusion



WorkFace Planning
does NOT require a 3D
Model



Programs Require
Process, Software,
Training & Measurement



O3 IS DIFFERENT.

1

Zero Legacy
Tech Debt

2

Purpose-built
AWP & Agile

3

Battle-tested
In the Field

Single, Modern
Platform



Supports Work
Packaging



Scalable Across
Project Types



Continuous
Innovation

- Cloud-Based
- Easy to Configure
- Modern SaaS Software

- Work Package Creation
- Automated Workflows
- True Constraint Management

- Robust Roles & Permissions
- Multi-Project Support
- Multi-Contractor Support

- Based On Client Input
- Release Every 2 Weeks
- Web-based Interface



The AWPXchange™

presented by



**VIRTUAL
SUMMIT**

**Tuesday
May 4, 2021**

10am - 3:30pm CT

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ON THE AGENDA

- **Client Case Studies from Leading Owners & EPCs**
Shell, Linde, and Suncor are Confirmed Speakers
- **Product Innovation & AWP Technology Roadmap Session**
- **Inspiration & Innovation Interactive Workshop**



GET IN TOUCH

We'd love to hear your thoughts
and understand your project or
portfolio's needs

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