Case Study Title: Digitising Lean Collaborative Planning and Constraint Management on a Large Hyperscale Data Centre Project in Northern Europe using Uconia Software in partnership with Exyte.

Company Overview | UCONIA | uconia.com

Uconia is an operating system and intelligence platform for the Construction Industry. Uconia bridges the gap between strategic scheduling platforms and the day-to-day, hour-by-hour reality of operations on site by connecting the master schedule to the detailed execution of work.

Uconia helps people and organisations deliver projects collaboratively, on time, and on budget by improving coordination before work begins - reducing delays, rework, and cost overruns without adding administrative burden.

Uconia supports Lean Construction practices by providing real-time visibility and a data-driven approach to Lookahead Planning, Constraint Analysis, Weekly Work Planning, and the measurement of Percent Plan Complete (PPC).

Author



Jason Carey

Author



Jack Darcy

Author



Marc Leddy

Overview & Background to the Lean Initiative

The Exyte project involved the construction and commissioning of a hyperscale data centre in Finland. As a global provider of engineering and construction services for highly controlled technical environments, Exyte delivers complex projects with demanding schedule, quality, and coordination requirements.

Prior to implementing Uconia, several operational challenges were impacting planning reliability and coordination across the live project environment. As is common on projects of this scale and complexity, project teams utilised a combination of spreadsheets, paper-based tracking methods, and informal communication channels to manage planning updates and progress reporting. These fragmented workflows created delays in updating schedules, reduced visibility of constraints, and limited the ability of project teams to make timely, data-driven decisions.

Within a Lean context, these conditions represent opportunities to reduce information waste, coordination delays, and waiting time in construction projects caused by disconnected planning and reporting processes.

To address these challenges, Exyte partnered with Uconia to implement a Lean-oriented digital planning environment designed to improve collaboration, support constraint management, and provide real-time visibility of project execution. The initiative aimed to strengthen planning reliability, improve reporting efficiency, and enable more effective collaboration across construction and commissioning teams.

The initiative was led within Exyte's project delivery framework, with Uconia implemented as a supporting digital environment to enhance existing Lean planning processes.



Figure 1: Last Planner & Progress Update Process Pre Uconia On Site.

Lean Initiative Undertaken – Lean Thinking, Tools, Techniques

The Lean initiative on the Exyte project focused on improving planning reliability and execution transparency through the implementation of a collaborative digital environment powered by the Uconia platform. The objective was to create a structured system that supported Lean planning practices, including collaborative planning, constraint management, visual management, and continuous performance improvement.

Establishing a Collaborative Planning Environment

A key element of the initiative was the creation of a collaborative planning environment designed to bring together multiple project stakeholders into a structured planning process.

Within Exyte's project controls environment, Uconia was used to support a dedicated collaborative planning control room where Uconia project managers, contractors, planners, and Exyte project leadership could jointly review upcoming work packages, identify potential constraints, and coordinate execution strategies.

This approach aligns with Lean collaborative planning principles, ensuring that those responsible for executing the work are directly involved in the planning process. By enabling structured discussions around upcoming tasks, the team was able to create more reliable commitments and improve coordination between trades.

The platform also enabled planners to visualise activities geographically using general arrangement (GA) drawings linked to the planning schedule. This visual approach improved understanding of work sequencing and supported more effective coordination between contractors operating in shared work areas.



Figure 2: The Uconia Control Room.

Digital Constraint Management

Constraint identification and removal is a fundamental Lean practice used to improve workflow reliability.

Prior to the implementation of Uconia, constraint management on the project was largely informal and often tracked across emails, spreadsheets, or verbal communication. This made it difficult to maintain a consistent overview of outstanding issues and their potential impact on upcoming work.

Uconia introduced a structured digital constraint log that allowed project teams to record, track, and manage constraints in a transparent and collaborative environment. Each constraint was assigned to a responsible party, given a target resolution date, and linked directly to the relevant activities in the project schedule.

This approach improved accountability while enabling teams to proactively remove blockers before they impacted site productivity. By making constraints visible to all stakeholders, the system encouraged earlier problem solving and reduced the likelihood of delays occurring during execution.

Supporting Weekly Collaborative Planning

Another important component of the initiative was the introduction of structured weekly planning sessions involving key contractors and project stakeholders.

These meetings focused on reviewing upcoming work, confirming readiness for scheduled tasks, and identifying any constraints that could prevent reliable execution. The Uconia platform supported these discussions by providing a shared digital view of planned activities, constraints, and progress data.

This process mirrors elements of the Last Planner System, where reliable commitments are established through collaborative discussions between those responsible for delivering the work. By enabling teams to review and confirm activities in a shared digital environment, the project was able to strengthen planning reliability and increase engagement across contractors.

Participation levels in the weekly planning process increased significantly following the implementation of the platform, reflecting stronger engagement from delivery teams and greater transparency around project execution.



Figure 3: The Uconia Platform Allows You To Break Out Tasks Into Further Detail.

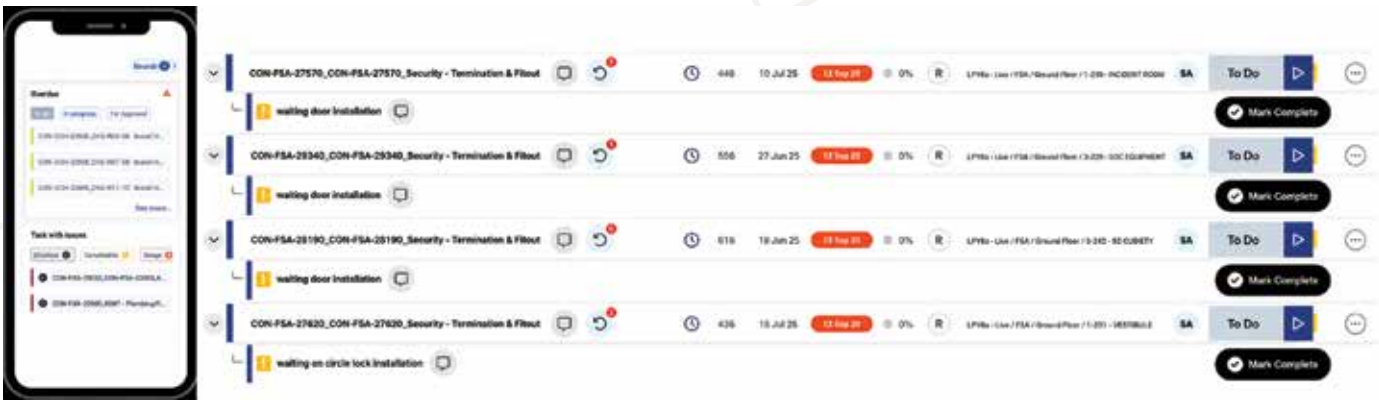


Figure 4: The Uconia Mobile App and Platform Highlighted Constraints Live From Site In Real Time.

Visual Management and Site Visibility

Visual management is another core Lean principle aimed at improving situational awareness and enabling faster decision making.

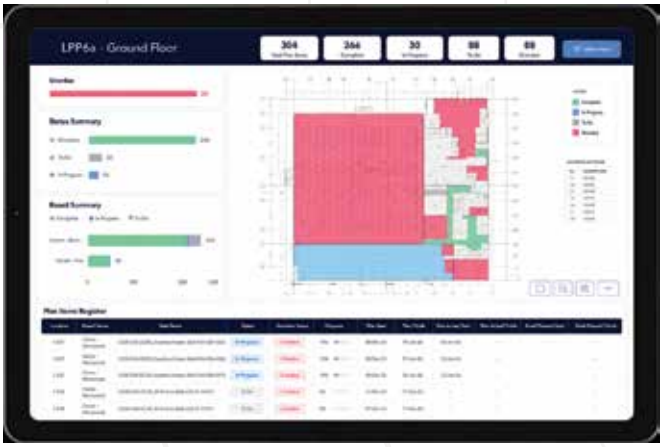


Figure 5: The Uconia GA Dashboard – The general arrangement dashboard provided Exyte and contractors with a visual representation of the building, highlighting areas of focus in daily dabs meetings.

Uconia enabled the project team to visualise work progress and task locations directly on project drawings through its GA dashboard functionality. This allowed stakeholders to quickly understand where work was taking place on the site and how different work packages interacted spatially.

The visual representation of activities helped reduce miscommunication between teams and supported more efficient planning discussions during collaborative planning sessions. By linking planning data with visual project information, the system enabled a clearer understanding of work sequencing and site logistics.

Integration with Existing Planning Systems

While Uconia provided the operational environment for collaborative planning and execution management, it was designed to complement rather than replace existing planning tools.

The project schedule continued to be managed within Primavera P6, which remained the master scheduling system for the project. Uconia integrated with this environment by enabling progress data and planning updates to be structured and validated before being pushed back into the master schedule.

This integration contributed to reducing the time required for schedule updates while improving the accuracy of progress reporting. By providing a structured system for collecting progress information from the site using the Uconia mobile app this ensured

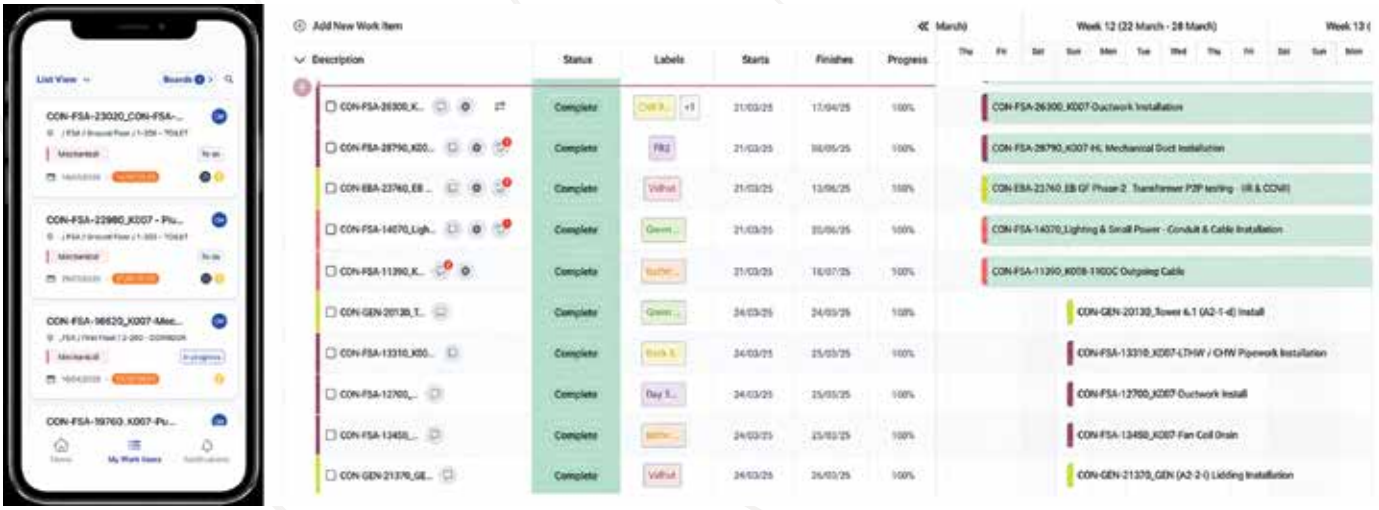


Figure 6: The Uconia Mobile App and Integration with P6 Primavera Allowed Site Teams To See Daily Tasks Aligned With Construction And Commissioning Schedules.



Figure 7: Mechanical contractor improved their performance significantly with the implementation of Uconia on site, using this bar chart, which shows Planned v Actual. April 2025 - Planned 153 tasks, Completed 155 = SPI 1.01

the schedule updates were based on real-time project data rather than delayed manual reporting.

Continuous Improvement and Performance Monitoring

The digital planning environment also supported ongoing monitoring of project performance.

Uconia enabled project teams to track key planning metrics, including schedule performance indicators and participation in collaborative planning sessions. These metrics allowed project leadership to monitor the effectiveness of the planning process and identify areas where improvements could be made.

By analysing this information on a weekly basis, the team was able to continuously refine planning practices and improve coordination between contractors. This iterative approach reflects Lean continuous improvement principles, where project teams regularly review performance and adapt processes to improve outcomes.

Overall, the Lean initiative combined collaborative planning practices with digital tools that improved visibility, accountability, and coordination across the project delivery team.

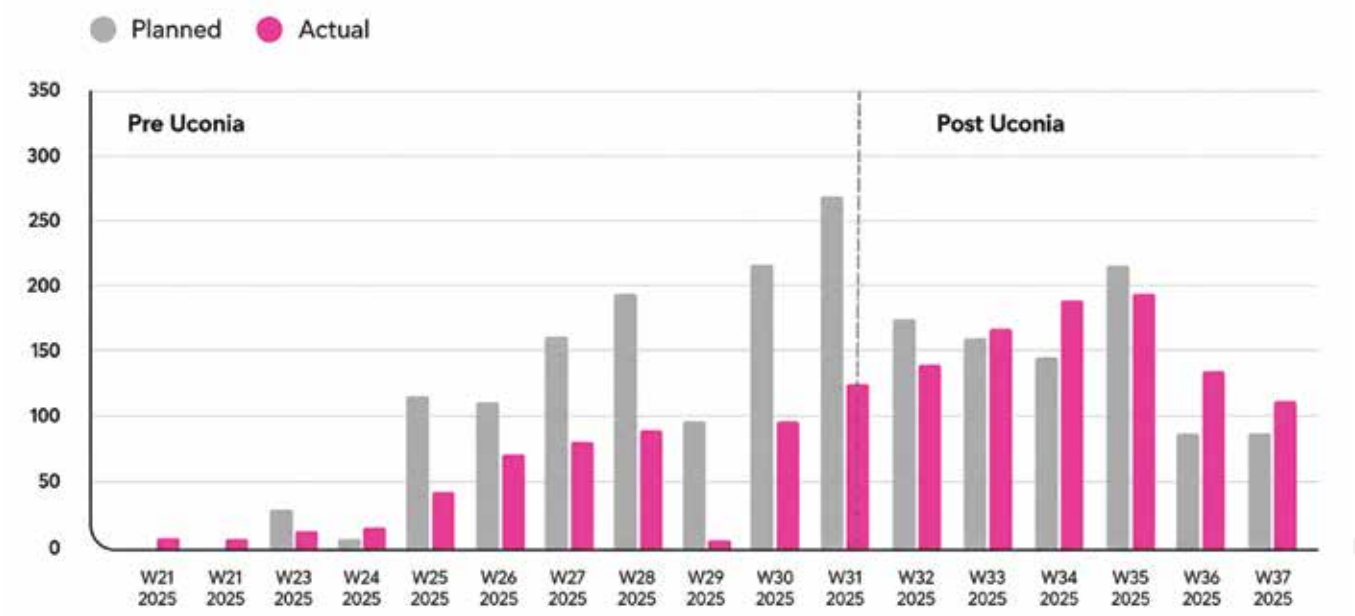


Figure 8: Commissioning Tag Performance - The above screenshot shows commissioning tag planned v actual for both pre and post Uconia

- Pre Uconia - Highlighting tag forecast underachievement - with approximately 50% of planned tags incomplete on a weekly basis.
- Post Uconia - More realistic target tag forecast, resulting in increased tag achievement. Yellow tag count increased to an average of 100 tags per week.

Lean Initiative Improvements & Impact

The implementation of the Uconia platform supported several measurable improvements in planning efficiency, collaboration, and project reporting.

One of the most significant impacts was the reduction in time required to update the project schedule. Prior to the initiative, updating the Primavera P6 schedule involved a time-consuming manual process that required consolidating progress data from multiple sources. Following the implementation of the digital planning environment, the time required to update the schedule was reduced by more than half following the implementation of the revised planning and reporting approach.

Reporting frequency also improved significantly. Instead of relying on monthly reporting cycles, the project team was able to transition to a weekly reporting model supported by real-time data captured within the platform. This enabled project leadership to identify potential issues earlier and make more informed decisions.

The collaborative planning process also saw strong engagement from project participants. Attendance at planning sessions increased to approximately 95% during the implementation period, reflecting increased participation from contractors and delivery teams.

This higher level of engagement contributed to improved planning reliability, as contractors were directly involved in confirming the readiness of tasks and identifying potential constraints before work commenced.

The introduction of structured constraint management also improved transparency across the project team. By logging and tracking constraints digitally, the team was able to identify potential blockers earlier and assign responsibility for resolving them.

Overall, the initiative improved communication, strengthened planning reliability, and reduced the time required to produce accurate project reporting. These improvements demonstrate how Lean planning practices supported by digital tools can significantly enhance the efficiency and coordination of complex construction projects.

Summary and Lessons Learned

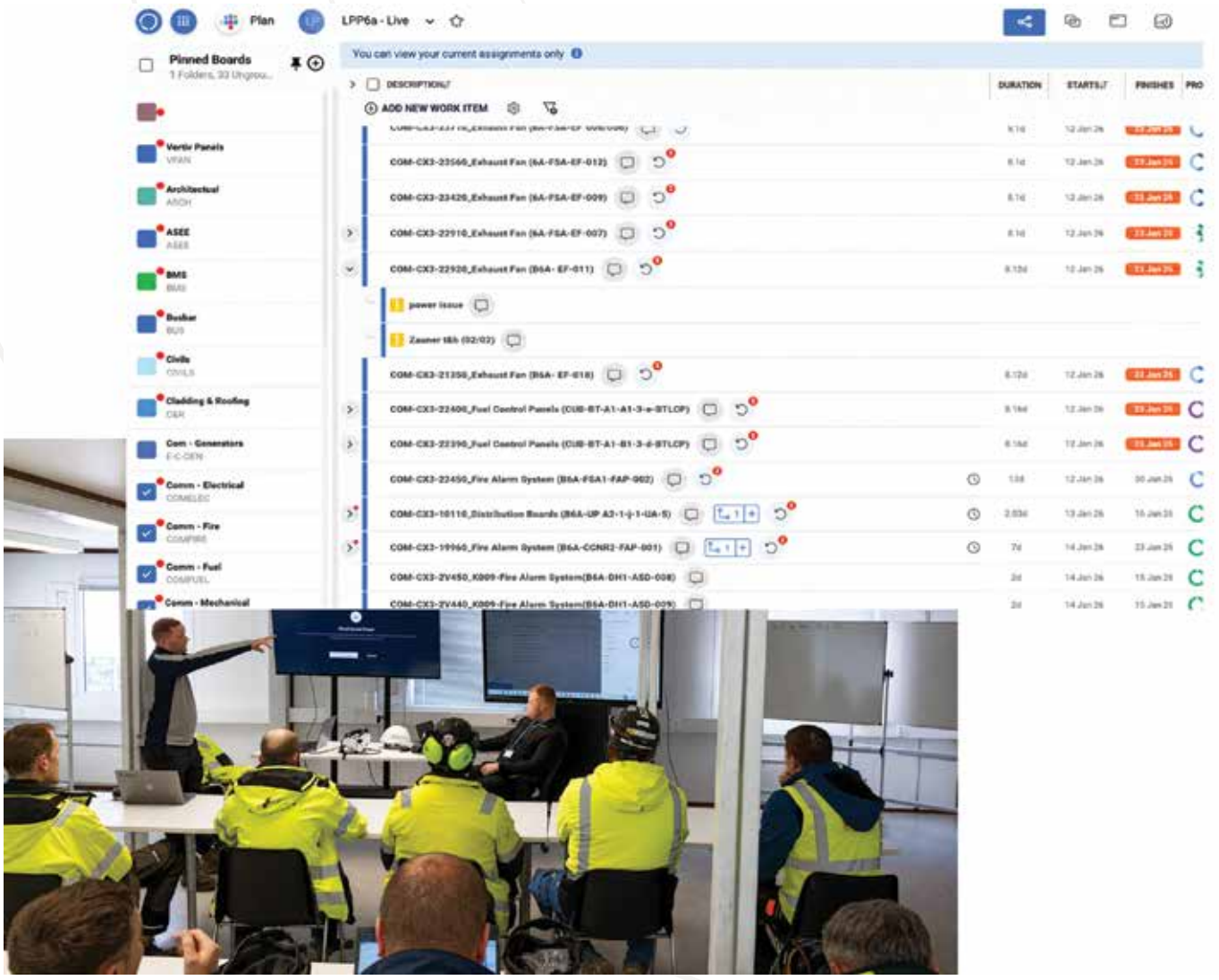
The implementation of Uconia on the Exyte project demonstrates how digital platforms can support the successful adoption of Lean construction practices.

A key lesson from the initiative was the importance of combining technology with active engagement from project teams. While digital tools provided the infrastructure for collaborative planning and constraint management, the success of the initiative depended heavily on leadership support and participation from contractors and planners.

Another important learning was the value of an early discovery and implementation phase. By working closely with the project team during the initial rollout, Uconia was able to structure the platform to reflect the specific planning processes used on the project. This helped ensure that the system supported existing workflows rather than disrupting them.

The initiative also highlighted the benefits of visual management and transparent constraint tracking in improving coordination across complex construction projects. Making planning information visible to all stakeholders encouraged greater accountability and supported faster problem solving.

Ultimately, the case study illustrates how integrating Lean planning principles with digital execution platforms can improve collaboration, increase planning reliability, and enhance decision making in complex project environments.



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