ORION



CUSTOMER SUCCESS STORY

Real-time production control for large-scale earthworks operations

48M
yd³
MATERIAL MANAGED THROUGH DIGITAL PRODUCTION CONTROL

200
Reports/Day
AUTOMATED WITH REAL-TIME PROCESSING

6
FTE Saved
ADMINISTRATIVE WORKLOAD ELIMINATED

24/7
Visibility
CONTINUOUS OPERATIONAL OVERSIGHT

PROJECT	BUDGET	YEAR	CUSTOMER
Fargo-Moorhead Diversion Channel	USD 1.2 billion	May 2021 – Ongoing	Acciona, S&B Group & North American CG

LOCATION	PROJECT TYPE	SCOPE	SOLUTION
Fargo, North Dakota, USA	Dams and earthworks	Real-time production monitoring and operational control across 24/7 earthmoving operations	Digital production control platform for earthworks execution management

THE CHALLENGE

Earthworks at unprecedented scale

The Red River Flood Diversion project presented a uniquely complex operational challenge: coordinating and controlling earthworks production across an immense construction footprint, with continuous activity running 24/7. The work involved moving **48 million cubic yards** of material, requiring precise coordination of equipment, operators, haul distances and production targets across multiple simultaneous work fronts.

Previous proximity-based tracking systems had proven too rigid for the dynamic realities of earthmoving, and traditional alternatives could track time and volumes but lacked the operational detail to understand how production was being achieved.

"We needed much more than production totals. We needed detailed operational intelligence to understand exactly how work was being performed."

Alejandro Fernández García

THE SOLUTION

Built for operational adaptability

Drawing on earlier experience in New Zealand, Acciona chose to continue developing its own platform rather than adopt off-the-shelf alternatives. The result was a specialized earthworks control system designed around field realities.

> *"External tools could track volumes, but they couldn't provide the operational detail we needed."*

CORE CAPABILITIES

Production Reporting
Digital capture of field production data

Shift Line-Up
Real-time workforce coordination

Operational Alerts
Immediate visibility into deviations

Equipment Monitoring
Continuous activity tracking

Data Integration
Unified operational data flows

Historical Analytics
Long-term production intelligence

IMPLEMENTATION

18 months to full deployment

The platform required 18 months of refinement, with Fargo's extreme environmental conditions adding significant hardware challenges. Close collaboration between project teams and local engineering support transformed the system into a reliable field-ready solution.

> *"It was a difficult road, but once everything came together, the results were clear."*

THE TRANSFORMATION

From reporting to real-time control

The project generated approximately 200 production reports per day across continuous operations. Without automation, processing this volume would have required significant administrative effort and delayed operational response. Instead, the platform delivered instant visibility and enabled immediate intervention when needed.

> *"Real-time visibility allows operational intervention as things happen—not days later."*

LOOKING AHEAD

Scaling earthworks intelligence

Following its success in Fargo, the solution is being considered for future large-scale earthworks projects, including upcoming developments in New Zealand. Its long-term value lies in building a production intelligence database capable of improving future planning, productivity and cost optimization.

> *"I'm proud to have contributed to such a complete earthworks solution."*
>
> Alejandro Fernández García

IMPACT AT A GLANCE

- Real-time visibility across continuous earthworks operations
- Automated processing of ~200 daily production reports
- Elimination of manual reporting delays
- Avoided need for 5–6 additional administrative staff
- Faster operational response to field deviations
- Improved production accuracy and reliability
- Valuable historical database for future optimization
- Scalable model for future earthworks projects