

Disclaimer: NEXORA and any other company names mentioned, except InterTwined Nexus, are fictitious and have been created solely to illustrate the workflow.

NEXORA Engineering - Support Drawing Communication Workflow with VendorX

Overview

NEXORA Engineering, a forward-thinking EPC (Engineering, Procurement, and Construction) firm, frequently collaborates with external vendors to fabricate pipe and structural supports based on in-house designs. One recurring challenge in these collaborations is the back-and-forth communication required to clarify drawing details, obtain quotations, and track fabrication and delivery status. To streamline this process, NEXORA, in collaboration with **InterTwinedNexus**, has implemented a structured discussion board and rule-driven system that facilitates transparent, auditable, and actionable communication with their trusted support partner, **VendorX Fabrication Services**.

This white paper, developed with the support of InterTwinedNexus, presents the problem context, the solution architecture, the nature of communication exchanges, types of queries, and how automated rules help Project Managers identify risks and act promptly.

Problem Statement

In traditional workflows, the exchange of support drawings and feedback occurs through email chains, file attachments, spreadsheets, or phone calls. This leads to:

- Lost context and lack of version control
- Delayed responses due to missed emails or unclear ownership
- Ambiguity in quote requests and approvals
- Lack of visibility for Project Managers into bottlenecks
- No standardized way to determine when an issue needs attention

With over 300 support drawings exchanged per month, the communication overhead and risk of oversight became unsustainable.

The NEXORA Solution: Discussion-Driven Support Drawing Workflow

To address the above challenges, NEXORA partnered with InterTwinedNexus to introduce a structured discussion board system built into its internal collaboration platform. Every support drawing exchanged with VendorX is now tracked as a single, structured entry with associated metadata and a threaded communication log.

Key Workflow Phases

Each support drawing passes through the following phases:

1. **Discussion:** Drawing is sent to VendorX. Vendor may raise clarification questions.

2. **Quote:** VendorX submits a quote. NEXORA reviews it.
3. **Approval:** NEXORA approves or requests a revision of the quote.
4. **Fabrication:** VendorX begins fabrication and provides an estimated timeline.
5. **Delivered:** The fabricated support is received by NEXORA.
6. **Closed:** The transaction is formally closed.

Each drawing entry includes:

- Support Drawing ID
- Title and description
- Current phase
- Next action party (EPC, Vendor, Both, None)
- Query (if any)
- Quote amount and status
- Estimated fabrication time
- Delivery and closure dates

Communication Flow Between NEXORA and VendorX

1. Initial Submission

NEXORA posts a new support drawing to the discussion board. This marks the beginning of the **Discussion phase**.

2. Vendor Query

VendorX reviews the drawing and, if needed, raises a query. Common examples:

- "Please clarify the clamp size."
- "Missing bolt hole dimensions on Sheet 2."
- "Weld type not mentioned—please confirm."

This marks the `next_action_by` as **EPC**, prompting NEXORA to respond.

3. NEXORA Response

NEXORA addresses the query directly in the same discussion thread, maintaining full context. The `next_action_by` flips to **Vendor**.

4. Vendor Quote Submission

VendorX uploads a quotation, transitions the item to **Quote phase**, and updates the quote amount and terms.

5. EPC Approval

NEXORA reviews and either:

- **Approves** the quote (moves to Approval phase)
- **Rejects** it and requests a revision (cycle back)

6. Fabrication & Delivery

Once approved, VendorX fabricates the support, shares expected timelines, and marks it as **Fabrication phase**. Once shipped, it enters **Delivered phase**.

7. Closure

Upon receipt and confirmation by NEXORA, the record is **Closed**.

Query Types and Their Value

- **Clarification Queries:** Helps ensure accuracy before quote.
- **Technical Discrepancy:** Identifies drawing mismatches or missing specs.
- **Commercial Queries:** Questions about payment terms or quantity discounts.
- **Change Requests:** When design revisions are made after submission.

These queries live alongside each drawing and form a complete history of collaboration.

The Role of Rules in Project Management

To empower Project Managers (PMs) and reduce manual tracking, NEXORA employs **auto-evaluated rules**, implemented with the help of InterTwinedNexus, to detect issues:

● Red Rule – Immediate Attention

```
return (  
    item.current_phase === 'Quote' && item.quote_status === 'Rejected' ||  
    item.current_phase === 'Discussion' && item.next_action_by === 'EPC' && item.query &&  
    item.query.trim().length > 0 ||  
    item.current_phase === 'Approval' && item.quote_status === 'Pending' ||  
    item.next_action_by === 'None' && item.current_phase !== 'Closed'  
);
```

Highlights:

- Quote rejected → needs action
- Query raised but EPC hasn't responded
- Quote pending in Approval phase
- No responsible party assigned

Yellow Rule – Monitor Closely

return (

```
item.current_phase === 'Discussion' && item.next_action_by === 'Vendor' ||
```

```
item.current_phase === 'Fabrication' && !item.estimated_fabrication_time ||
```

```
item.current_phase === 'Delivered'
```

);

Highlights:

- Vendor is yet to respond to a query
- Fabrication started, but no ETA
- Item delivered but not formally closed

Green Rule – On Track

return (

```
item.current_phase === 'Closed' ||
```

```
item.current_phase === 'Fabrication' && item.estimated_fabrication_time ||
```



```
item.quote_status === 'Approved'
```




);

Highlights:

- Closed or progressing items
- Quotes approved and fabrication underway

Benefits of the System

-  **Full Traceability:** All discussions and status changes are timestamped.
-  **Actionable Insights:** Rules surface high-priority issues for PMs.

-  **Reduced Delays:** Faster resolution of queries accelerates quoting and fabrication.
 -  **Dashboard Integration:** Real-time indicators of project health.
 -  **Collaborative Clarity:** All parties have a shared view of status.
-

Conclusion

By implementing a structured, rule-aware discussion board for support drawing communication, NEXORA Engineering has significantly improved its collaboration with VendorX. This transformation was made possible with the expertise of InterTwinedNexus, who helped design and implement the workflow and rule engine.

The system ensures transparency, reduces delays, and provides Project Managers with tools to act decisively — transforming a historically chaotic process into a controlled, data-driven workflow.

NEXORA now has a scalable, standardized method to manage vendor exchanges across hundreds of projects, ensuring both technical quality and operational excellence.

InterTwinedNexus continues to support engineering firms like NEXORA by delivering modern, workflow-enhancing solutions that simplify complex engineering collaboration challenges.