

SUPPLY LOGIC 365

Solution Primer for Ship Supply Automation

An introduction to how modern ship supply operations are digitised and automated

Built on Microsoft Dynamics 365 Business Central
Hosted on Microsoft Azure

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Learn more: www.supply-logic.com

About This Primer

This document explains how ship supply operations work, where the process breaks down, and how those workflows can be digitised and automated. It is an educational reference, not a sales proposal — commercial terms and pricing are handled separately, and optional capabilities are stated explicitly.

Supply Logic 365 is an integrated ship supply management solution built as a certified extension on Microsoft Dynamics 365 Business Central and hosted on Microsoft Azure, developed by Directional Pte Ltd for ship chandlers, marine suppliers, and provisioning companies. It covers the operational chain from receipt of a Request for Quotation through quotation, vendor sourcing, purchasing, order fulfilment, and financial posting — sharing one customer master, vendor master, item master, and financial ledger throughout, with no synchronisation layer between a maritime front end and a separate accounting system.

Why Ship Supply Is Digitising Now

Ship supply has historically lagged other freight sectors in adopting digital workflows, but several pressures are closing that gap: experienced RFQ and pricing staff are hard to hire and retain; vessel managers increasingly benchmark suppliers on quotation turnaround as much as price; bonded goods and safety equipment carry documentation obligations difficult to satisfy from email and spreadsheets; and procurement platforms such as ShipServ, MESPAS, and ProcureShip now route a growing share of RFQ volume that a supplier must connect to systematically or be excluded from.

Ship supply also differs from conventional wholesale distribution in ways that matter operationally: the customer is a vessel, not a fixed location; the catalogue spans unrelated categories from provisions to spares to safety certificates; item descriptions arrive in the customer's own wording rather than the supplier's; and the delivery deadline is set by a vessel's schedule, not negotiated. These differences are why purpose-built automation has more to offer here than generic distribution software.

Understanding the Ship Supply Business

Ship suppliers, or ship chandlers, provision vessels with provisions, bonded stores, cabin and galley supplies, deck and engine stores, safety equipment, spare parts, and technical consumables — typically within the narrow window a vessel is alongside a berth or at anchorage.

The Stakeholder Chain Behind a Single Request

A request rarely comes directly from the vessel. It passes through several parties first, which explains why requests are worded the way they are: the ship owner holds commercial responsibility but is rarely involved day to day; the technical manager sets procurement policy and approved suppliers; the purchasing agent consolidates requirements and is usually the actual sender of the request a supplier receives; the captain and chief engineer identify onboard needs but rarely deal with suppliers directly; and procurement platforms are increasingly used to broadcast requests to multiple suppliers at once.



A supplier's real customer relationship is usually with the technical manager or purchasing agent, not the vessel directly — one reason customer-specific pricing and item-matching history, described later, matter as much as they do.

Types of Ship Supply Companies

- **General chandlers** — cover the full range of provisions, stores, and consumables across most vessel types.
- **Provisions specialists** — focus on fresh and dry food, often with cold-chain and dietary compliance needs.
- **Technical suppliers** — supply engine parts, deck equipment, and technical consumables.
- **Offshore suppliers** — serve offshore support vessels, often under longer-term contracts.
- **Regional and global suppliers** — range from single-port regional operators to multi-country global networks.

Where Manual Processes Break Down

Most ship suppliers have historically managed these workflows with email, spreadsheets, and a general accounting package. This works at low volume but degrades predictably as the business grows.

Failure Point	Operational Consequence
Manual re-keying	Transcribing RFQ lines by hand is the largest consumer of sales-team time and the most common source of error.
Item ID by memory	Matching a customer's wording to the correct item depends on the individual handling it, and that knowledge leaves with people.
Ad-hoc vendor comparison	Prices compared informally rarely identify the best offer, and the decision basis is not recorded.
Inconsistent pricing	Markup applied by judgement produces different prices for the same customer and item, eroding margin.
Fragmented records	Documents for one vessel call are spread across mailboxes and folders, slowing retrieval and reconciliation.

Illustrative — time ranges commonly reported by ship supply teams, not a measured benchmark. Actual time varies by RFQ size and staff experience.

Re-keying one RFQ typically takes 20–60 minutes; identifying ambiguous items, 15–45 minutes; comparing vendor quotes, around 30 minutes — time that compounds sharply when a large request arrives close to a vessel's sailing deadline and must still be quoted before it sails.

Business Risks of Manual Operation

- Requests overlooked in a busy inbox, with no system prompting follow-up.
- Wrong items delivered because a description was misread or misremembered.
- Dependency on individuals who hold undocumented knowledge of customer conventions.
- Difficulty reconstructing an auditable record of how a price or vendor decision was reached.

Industry Trends and Future Requirements

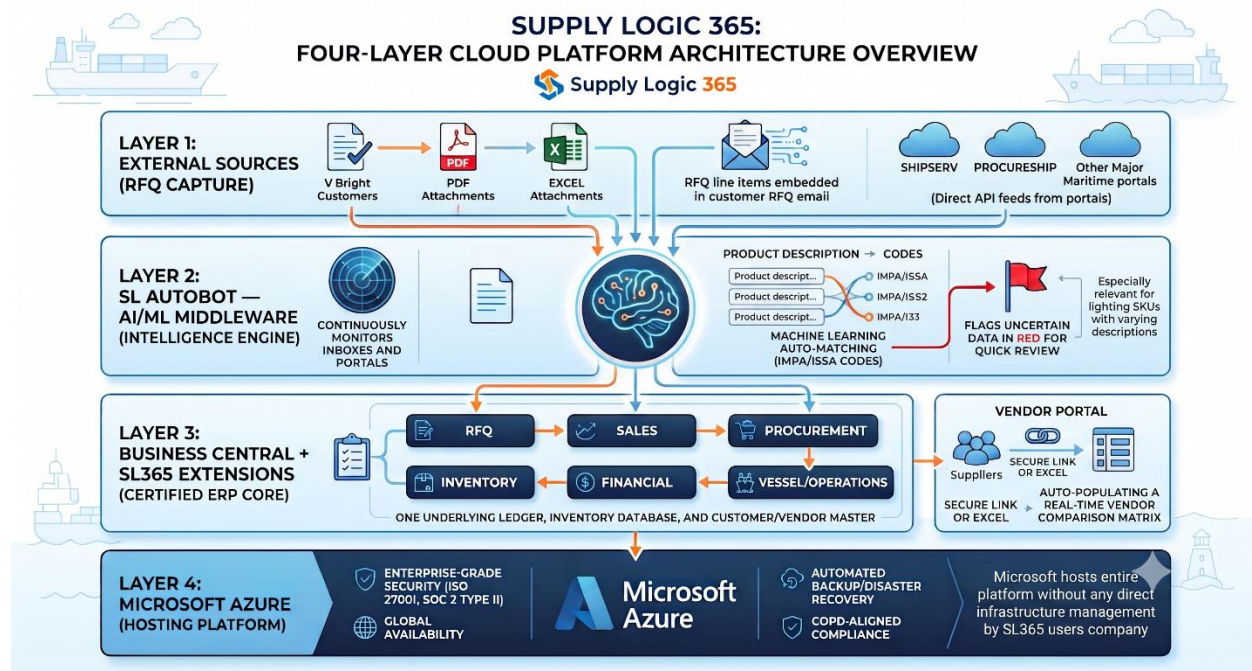
A growing share of maritime RFQ volume is now routed through dedicated procurement platforms — ShipServ, MESPAS, and ProcureShip among the most widely used — rather than direct email, making direct integration increasingly a condition of participation rather than a convenience.

Across the wider industry, four capabilities are becoming the expected baseline for procurement automation: reading scanned and photographed documents accurately (OCR); matching free-text descriptions to the correct catalogue item; converting a validated request into a priced quotation with minimal manual assembly; and using consumption history to anticipate replenishment ahead of a stockout. Supply Logic 365's Auto Bot 365 and AI Suggestion capabilities, described next, address the first three directly today; the fourth is represented through demand-based replenishment triggers on inventory.

As suppliers digitise, the reporting questions asked internally tend to converge on a consistent set — which vessels and customers are most profitable, which vendors perform reliably, and how efficiently RFQ volume converts into revenue — questions that are difficult to answer from spreadsheets and straightforward once sales, purchasing, and finance share one dataset.

Solution Architecture

Supply Logic 365 is structured in four layers: external channels through which requests arrive, an automation layer that interprets them, the Business Central application layer where processes execute, and the Azure infrastructure layer beneath.



Each inbound request passes through the same stages: text is extracted regardless of source format, translated into a consistent structure, validated with any exceptions flagged, and unresolved item descriptions are passed to the AI Suggestion engine. Once structured, a request becomes a native Business Central record and follows standard processes — quotation, sourcing, order, inventory movement, and financial posting — sharing one dataset throughout. The platform runs on Microsoft Azure, which provides identity management, encryption, regional data residency, backup and disaster recovery, and elastic scale as volume grows.

Solution Functionality

RFQ Management

The Auto Bot 365 monitors designated mailboxes and connected procurement portals, retrieving and interpreting incoming requests without a user opening the attachment. PDF and spreadsheet attachments are parsed directly; scanned or photographed documents are read using OCR; and lines that cannot be interpreted with confidence are flagged for human review rather than silently guessed. The result is a Request for Quote record with the original document retained alongside the interpreted lines for verification.

AI Item Matching

Identifying the appropriate item in the Items List (Item Master) that a customer has specified in their RFQ line items is the hardest judgement in RFQ processing. For each unresolved line, the system presents up to five candidate items ranked by how closely the description matches the catalogue — but where that customer has previously been supplied against a similar description, the item last selected for them takes precedence over the text-similarity ranking. Matching history is held per customer, with no learning shared across different customers. The user always confirms the selection; the system proposes, it does not decide.

Quotation Management

Interpreted requests convert into sales quotations carrying customer, vessel, and line detail forward, with line-level and document-level markup, customer and agent discounts, and pre-agreed matrix pricing for known customer

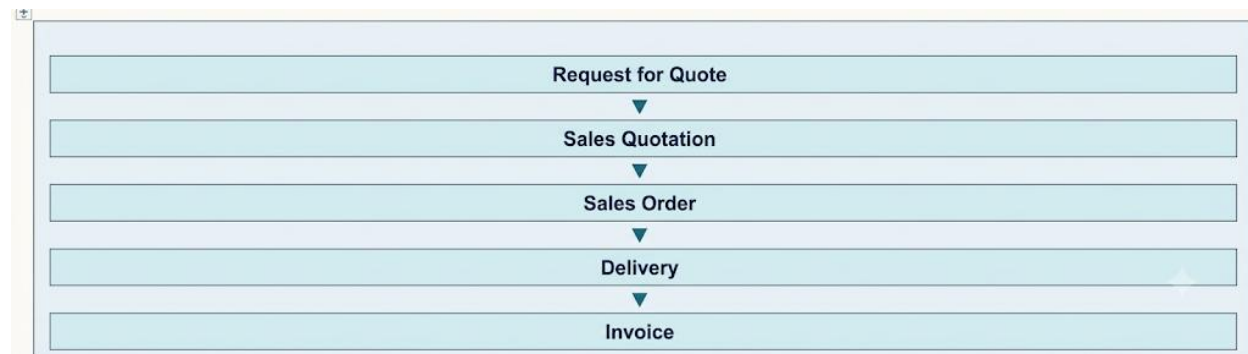
segments applied automatically. Quotations can be prepared in the customer's currency with configured exchange rates, each line shows whether it is met from stock or requires purchase, and sensitive discounts can be shown on the document or applied internally through a credit note instead.

Vendor Sourcing

Items requiring external purchase are grouped and issued to vendors as purchase quote requests directly from the quotation. Vendors respond through a secure portal link or an attached spreadsheet, with prices posting back automatically. Every vendor's quoted price is retained against the request for later review, returned prices populate a comparison matrix shaded by price level, and a single action can select the lowest price across all lines.

Voyage Management

Each vessel call is assigned a reference through the SL365 Marking Ref Entry Card at the point a request is received. Every document generated afterward for that call carries the same reference, so the complete voyage history is a single connected record rather than scattered across systems.



Inventory Management

- **Catalogue integration** — items carry IMPA and ISSA references alongside internal or customer-specific codes, searchable by any of them.
- **Barcode processes** — receiving, picking, and stock counting supported by barcode and QR identification.
- **Replenishment** — replenishment policies flag items nearing reorder thresholds based on movement history.
- **FEFO** — first-expiry-first-out handling applies to dated stock such as provisions.

Financial Management

Because the solution runs inside Business Central, financial posting follows directly from operational activity: margin is visible by voyage, customer, or vessel; multi-currency transactions post using configured exchange rates; receivables and payables ageing draw on the same transaction data; and every posted transaction retains a link back to its originating document, supporting a complete audit trail.

Reporting and Analytics

Because sales, purchasing, inventory, and finance share one dataset, reporting reflects the business as it actually operates. Business Central includes standard reporting out of the box, and this can be extended with Power BI for more visual, interactive analysis — commonly covering RFQ conversion rate, quotations won and lost, margin by vessel or customer, vendor performance, and inventory turns. These are commonly requested views rather than a fixed list; because the underlying data is structured and shared across modules, reports can be built around whatever questions matter most to a business. Power BI connectivity is configured as part of implementation scoping rather than enabled automatically.

The Microsoft Platform

Supply Logic 365 is published as an extension to Microsoft Dynamics 365 Business Central rather than an independent application. Sales, purchasing, inventory, and finance operate on one dataset, with no interface to

maintain between an operational system and an accounting system. Business Central is updated by Microsoft on a continuous release cadence, with the extension maintained against those releases, so customers receive platform improvements without a separate upgrade project — and standard Business Central capability, plus the wider Microsoft 365 and Power Platform ecosystem, is available alongside the ship supply functionality.

Because the solution is native to Business Central, it sits within the same ecosystem as tools many customers already use: the mailbox that receives RFQs can be an existing Outlook mailbox; data can be exported to Excel and vendors can quote using an Excel template; Teams can support internal discussion of flagged items; Power Automate can extend workflow where needed; and Power BI can extend reporting into interactive dashboards where configured.

Security, Compliance, and Data Protection

Because Supply Logic 365 runs on Business Central and Azure, security and compliance capability is largely inherited from the Microsoft platform. Specific certifications should be confirmed against Microsoft's current published compliance documentation, as these are maintained and updated by Microsoft directly.

- **User roles and segregation of duties** — access is controlled through Business Central's role and permission model, and responsibilities such as raising and approving a purchase order can be separated where required.
- **Audit logging** — changes to key records are tracked, supporting after-the-fact review of who changed what and when.
- **Encryption and recovery** — data is encrypted in transit and at rest, with automated backup and regional disaster recovery in line with Microsoft's published service commitments.
- **Compliance** — Microsoft maintains an extensive, continually updated set of certifications across global regulatory frameworks for Azure and Dynamics 365; current status should be verified directly with Microsoft for the specific region and service.

Implementation Approach

The methodology is framework-neutral and adapts to how a customer prefers to work, while retaining a fixed set of phases and review points. Duration varies with the number of RFQ formats to be automated, source data quality, and customer availability for testing. Phases overlap by design — data migration and document formatting proceed alongside configuration, and training begins before testing concludes.

Phase	Purpose
Discovery	Confirm scope and processes; catalogue RFQ formats and portals to be automated; assess data quality.
Configuration	Provision the environment; configure finance, inventory, sales, and purchasing; establish Auto Bot 365 capture.
Data migration	Migrate customers, vendors, items, and opening balances; load purchase history supporting item matching.
Testing	Structured user acceptance testing led by the customer, with issues logged and resolved before progressing.
Training	Role-based training for sales, procurement, warehouse, and finance users, supported by written guidance.
Trial operation	Process live transactions under supervision to confirm readiness before go-live.
Go-live	Transition to production with heightened support during the initial operating period.

Success depends on identifying every RFQ format early, item master data quality, and customer-side ownership of testing — acceptance testing is most effective when performed by the people who will use the system daily.

Support Model

Support is delivered through a tiered structure, so routine questions are answered quickly in the customer's time zone while technical issues reach the appropriate depth of expertise.

Tier	Location	Handles
Level 1	Singapore, business hours	First point of contact — user questions, guidance, access issues, initial assessment of reported problems.
Level 2	Singapore, Malaysia, India and Philippines	Configuration analysis, data investigation, automated document processing issues.
Level 3	Singapore, Malaysia, India and Philippines	Application-level investigation, defect resolution, and Microsoft escalation where relevant.

Requests are logged, triaged at Level 1, and resolved or escalated with diagnostic detail already gathered. Periodic reviews between customer and Directional cover recurring issues and upcoming needs, enhancement requests are tracked separately from support issues, and written guidance supports users between interactions. Specific service levels are set out in the applicable service agreement rather than in this document.

Why Customers Choose Supply Logic 365

- **Efficiency** — automated RFQ capture and quotation reduce the administrative work per request, letting existing staff handle more volume without proportional headcount growth.
- **Accuracy** — reduced manual re-keying and assisted item matching lower transcription and selection error, while keeping every automated decision visible and reversible.
- **Visibility** — a single connected voyage record and one shared financial dataset mean sales, procurement, inventory, and finance always describe the same underlying reality.
- **Scalability** — cloud-hosted on Business Central and Azure, capacity grows with the business without a parallel infrastructure investment.
- **Platform** — Microsoft Dynamics 365 Business Central and Azure bring continuous platform investment, a broad ecosystem, and enterprise-grade security maintained by Microsoft.

About Directional

Directional Pte Ltd is a Singapore-based Microsoft Partner focused on maritime supply chain software. The company develops and owns the Supply Logic brand, and Supply Logic 365 is its ship supply solution, combining Singapore-based consulting and front-line support with an India-based delivery and engineering team, working with ship suppliers in several countries.

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