



Supply Management and Response Technology (SMART)

A technology solution to the rapid escalation of supply chain risks in volatile markets

Feature Summary



Centralised supplier data & ratings



Supplier compliance & plant capacity



Product quality & compliance: certification, testing, ISO Standard Management



Price & features comparison



Rapid Sourcing: Tenders, RFQs, Auctions, Catalogues



Contract management: KPIs, SLAs



Surge control, pivot distribution to new outbreaks



Risk management: supply failure, product failure, market diversity



Asset management: maintenance, lifecycle



Large scale crisis: natural disasters, pandemics, regional & global conflicts, place huge stress on emergency response supply chains, exposing severe weaknesses. COVID exposed the world's lack of preparation, hitting public health & aged care sectors and global economies simultaneously, exposing the risks of supply chain globalisation and reliance on single source origin.

Why were supply chains so badly impacted?

In retrospect, the answer is obvious, procurement teams had too rapidly embraced global markets and cheap prices. Buyers supported global markets dominated by a few players. This was compounded by domestic manufacturers being unable to compete on price, moving their operations to the same markets, making the perfect storm through single origin sourcing.

Buyer's reactions made matters worse:

- Suyers rushed to spot buy available PPE stock
- Many had to spend 000's of hours adapting their supply chain
- Suddenly they were working with unknown, untested suppliers
- Prices spiralled (20 times in some cases) & quality failed
- Foreign Governments diverted exports to local markets leaving Australia stranded
- Quality control became corrupted by conflicting standards, poor supplier data, uncheckable certification
- A common response from authorities was to simply publish supplier lists with no product data or quality oversight.
- The US Government's response was to employ a few unqualified individuals to Google search the world for PPE (ref. Film: "Totally Under Control")

Can this happen again? Yes, we still haven't addressed the core problems: It's time to implement a permanent solution

Organisations that operate as first responder and use essential products & services need to develop risk based supply chain strategies to ensure sustainability and resilience in times of crisis.

Technology can support supply chains in crisis

SMART (Supply Management and Risk Technology) is a sophisticated technology platform developed by a Sydney based procurement & risk management software business, 4Links Technology. (4Links.com.au)

SMART enables any organisation, including first responders, to build a resilient and sustainable supply chain. It ensures you control the risks associated with products and services that may be affected by supply or quality failure, which will adversely impact your operations, customers, and in many cases the community and economy.

SMART is built for organisations that have zero

tolerance to supply failure: emergency services, police, food, health & aged care services, manufacturing, utilities, and defence. SMART enables high risk sectors to apply risk management strategies to existing procurement activity & systems.

SMART integrates multiple application layers to embrace all essential risk elements, and provides continuous access to real time supply chain data. This allows users the flexibility to pivot their buying within diverse global & domestic markets, and operate within an environment of full compliance and market knowledge.

SMART is a single supply management platform embracing core procurement features integrated with key risk management applications, and real time connection with markets, key features include:



Supply chain compliance, verification of business data, insurances, credentialling and Modern Slavery.



BlueSpec: a technical blueprint specification tool, collecting & analysing product data, technical specs, pricing, cost analysis, comparison, standards, certification, quality, source of origin.



Marketplace: connecting Buyers to their supply chain with messaging, document sharing & chats.



Risk Management: policy documentation & performance measurement providing transparency across key risk exposures and mitigation strategies.



Contract management with collaboration tools to ensure KPIs & SLA terms are measured



Multiple sourcing tools including RFQs, eTenders, Auctions & Catalogues.





Building Supply Chain Resilience

SMART enables your Procurement Team to scope risk issues at every level of the procurement and product life cycle. This data is consolidated as a visible index on supply chain risks. SMART allows Buyers to identify & control all the inputs for the purchase & validation of essential products. Procurement + subject experts + technical expert's data is rolled into a looped control system. SMART uses risk-based modelling, specialist procurement systems and process controls to give you visibility across supply chain risks, and provide the tools to mitigate them.

We use guidance from the following quality standards: ISO 9001, AS9100D (Aerospace), IATF 16949 (Land Vehicles) ISO 22000 (Food Security). For quality management we use: ISO 22301, (Business Resilience and Security), ISO 27001 (Information Security), ISO 28001 (Supply Chain Risks), ISO 31000 (Risk Management Guidelines) and ISO 31010 (RM Techniques)

SMART has 9 core modules integrated under a cloud based, SaaS application:

01 Risk Management (risk identification and mitigation)
02 BlueSpec technical requirements definition (what, where, how do we buy)
03 Marketplace Mapping (sourcing and managing suppliers)
04 Compliance & Quality certifications
Rapid sourcing tools (sourcing & catalogue systems)
O6 Supply chain performance management (SLA/KPI)
07 Inventory controls
08 System compliance auditing
09 Asset management (asset lifecycle & maintenance)

Q Identify & Control your Risks



SMART enables you to manage supply chain risk by mapping your procurement relationships and product / service dependencies.



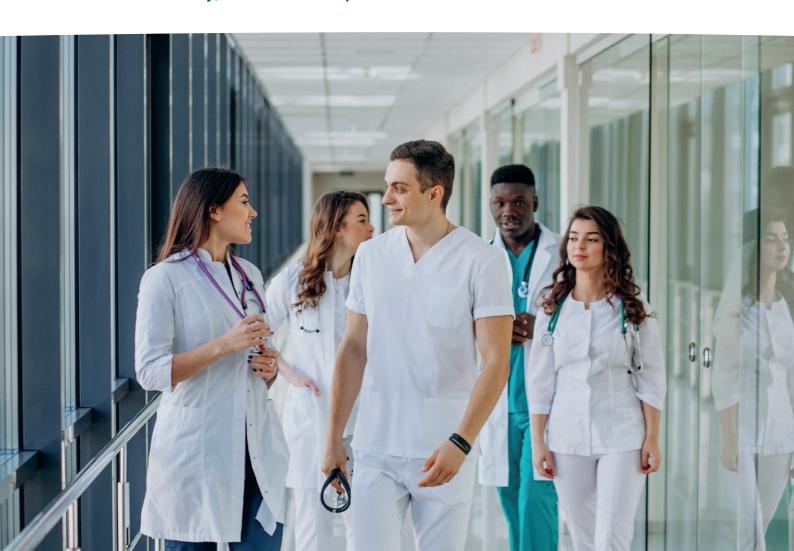
SMART enables your planning team to identify & manage risks across your procurement process and supply chain.

- The process starts by mapping your supply chain relationships, where are you most exposed? Which Manufacturers and essential products?
- The process flows on to life cycle tests for raw materials, manufacturing, transport, quality, inventory and single or multi source.



SMART cascades from high-level observation into granular layers where every item is exposed to risk planning. This process identifies the triggers that influence your risk and impact mitigation strategy.

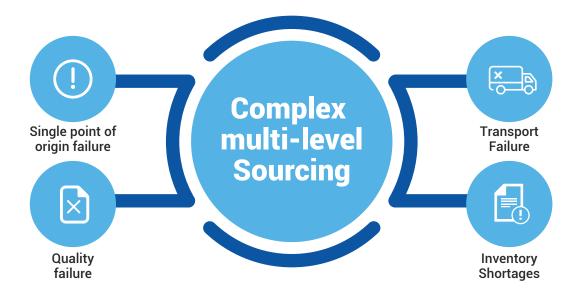
Given many risks can never be expunged the mitigation plan traps the offset treatment, so you can identify the level of risk you have and cost of mitigation. The key is to balance the cost of mitigating risk exposures against the impact on brand reputation, business continuity, or downstream public risk.



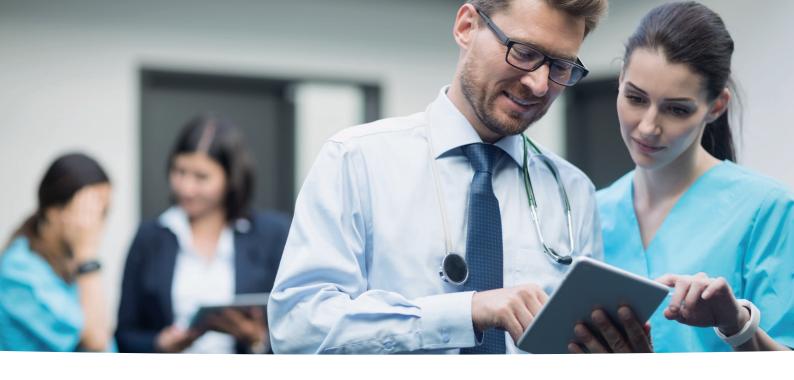


Risk Mitigation

Developing a resolution to risks may be as simple as invoking a dual supply strategy, however in essential products & services or where zero risk is mandated, your team may recommend complex multi-level sourcing, offsetting all triggers which may include:



Sovereignty has become a key supply chain issue, meaning your risk strategy may include local manufacturing and raw material sourcing. SMART enables you to control your risks, you may still use the same suppliers and transports hubs, but you may engage them differently, with real time event controls and mitigation controls to match your risk appetite using guidance from ISO 31000 and ISO 31010



BlueSpec: Your Digital Specification Tool

BlueSpec is a digital blueprint to build a sustainable supply chain. It develops a data matrix for the products and services you buy, and aligns your processes to meet various ISO standards: 9001, 14001, 22301, 27001, 28001, 44001, 45001, and 55001.

BlueSpec can collate 1000's of data elements and business rules into layers including:



Features, functions, requirements



Certification and compliance with global standards including Modern Slavery



Pricing & volume breaks



Point of origin tracing



Technical specification & standards



Manufacturing locations & plant capacity

Suppliers can feed data in real time. Technical changes, price updates, product recalls. BlueSpec uses a wide range of coding schemes simultaneously so you can identify products by: OEM, Order part, SKU part, UNSPSC code, GMDN code for medical devices, and GS1 barcodes.

BlueSpec data is used to instantly populate our real time sourcing tools such as tenders, RFQs & Auctions to rapidly create the right market response to both emergency and normal procurement demands. It handles specification, response collection & evaluation, comparison,

multiple level pricing, certification, and manuals. BlueSpec forms your single point of reference for multi-product comparison against a standard risk benchmark. BlueSpec is the single point of truth, linked to a continuous cycle of rolling KPIs and SLAs with rapid price updates.

Once you engage a BlueSpec file you can onboard existing suppliers through SMART Marketplace. BlueSpec grows as suppliers feed in data, where every item selected in the risk plan is compared against your common BlueSpec matrix.





Marketplace - Global Supply Chain Visibility and Connectivity

SMART Marketplace automates onboarding suppliers, issuing company entity validations, prequalification checks, modern slavery checks, and compliance audits on manufacturers. The system uses UNSPSC trees holding over 50,000 product definitions.

All Buyer / Supplier communication is securely logged under separated user and supplier access.

New products, product & price updates are pulled into Marketplace, where the Risk Management, Compliance and BlueSpec modules maintain a deep level scan on data changes. A core objective of Marketplace is to migrate your supply chain management from a list or spreadsheet to an online workplace that offers continuous connection to your global markets. You may define secure access to selected users, where your lead buying team may feed 100s of independent communities with buying guides,

technical data, or simply allow them access to Catalogues for their own sourcing.

SMART identifies suppliers via an onboarding process using a number of compliance gates. The system is globally aware and tracks source data through the supply chain enabling country & regional product certification, technical specs and Modern Slavery tests.

Marketplace is also a central supply chain connector linking all participants eg. Health Authorities, Health service operators, Hospitals, and Health Associations allowing peer groups to communicate and share data & knowledge.

Authorised participants within a sector can access secure data & Bluespec requirements, providing a single source of truth and making complex processes more efficient, productive & safe.



Compliance, Standards and Quality Control

While Marketplace enables global connectivity with your supply chain, SMART's compliance module underpins your Risk Models with compliance tools that can manage 100s of QA and certification triggers on essential products or services. The system draws on over 6000 ISO management system standards and all medical products and system standards. You can invoke part or all of any standard such as 9001, 14001, 45001. Standards can be operated for both internal & external assessment.

Custom components allow the development of specific controls including, components certification, raw materials / finished goods audits, right down to metallurgy standards (implant assessments). Every supplier and product is tested and validated against the standards mapped to that product or service. SMART includes a range of control systems linked to predictive reporting pre-warning you on

conditions. The scale of the specific compliance will be driven by the risk mitigation, KPIs / SLAs you select for each essential item.

As event triggers are generated data is tested for date + time controls and minimum pass thresholds. This ensures all event requests are closed on time, all events out of tolerance are automatically triggered to alerts and escalations.

The event triggers can carry complex test sheets and evidence forms which flow to key specialists (internal / external) who are responsible for validations such as metallurgy testing, chemical compound testing, medical device compliance to standards including:

- Product standards
- Product certificates
- **⊘** Test results
- **⊘** Recall Maps



Point of Origin Validation and Manufacturer Profiles

Who and where you buy is a key compliance issue with growing exposure to modern slavery or black-market product branding. To manage these risks SMART has its own origin source tracing, all manufacturers and distributors are mapped to the plants of origin and OEM brands.

This includes plant audits, plant production capacity, transport routing, and definitive trace to origin source and Modern Slavery assessment (ISO 22400).

Quality control and compliance with product and service standards is a critical risk. It has become common to see distributors switch products and manufacturer sourcing exposing you undocumented risk (ISO 22301, 28001).

SMART Controls this:

- 01
- The system automatically invokes a standard compliance and certification process against all products.
- 02
- The system requires suppliers to upload MSDS sheets and other compliance evidence so all test elements may be reviewed.
- 03
- Contract management tools can run 100s of specific KPIs & SLA terms including trigger points such as stock indicators, exchange rates, government trade bans / warnings, shipping, and product quality updates.





When a crisis occurs rapid access to data and communication is vital to develop a response. To meet these connectivity issues SMART has 5 sourcing technologies with secure, auditable messaging and document sharing providing your 24/7 interface with global suppliers.

Sourcing tools include:







Live Auction



Catalogue



Trade Boards



RateBoard

Each tool can run multiple events and every event has a dedicated file management silo, with integrated chat forum, SRM, Notes logs, Audit logs, Document sharing folders, private document folders, Budget, and approval work flows. All your global SOX standards for traceability and reporting are met, placing you seconds away from real time supplier engagement globally.



Asset Management and First Response

While a major element of any emergency response system is consumables, assets are also a vital layer, as many first responders use fleets of mobile response assets: medical devices, medical triage units, beds, tents, water trucks, pumps, compressors.

The proper maintenance of an asset and supply of consumables is vital to successful response tactics ISO 55001. SMART enables unlimited location maps where access controls and asset registers

are maintained, including: operational budgeting, scheduled maintenance, break/fix, whole of life asset planning & budgeting

Daily operational requirements are also managed such as WHS briefing, crew & volunteer onboarding, site inductions, knowledge support, and compliance audits.

SMART allows you to maintain assets in a state of high preparedness to address emergencies with confidence.



Summary

COVID has taught us a critical lesson: It's time to understand and plan for supply chain risk. Global markets have sent a stark message: we need to balance the benefits of low-cost products against the reality of single supply source failures.

If your operation is vulnerable to component outages, quality failure, shortage of supply, if you have zero tolerance to supply chain failure in any context, then it's time to get SMART.

SMART starts with risk planning, to expose the consequences of failure to source mission critical products or services. If your impact model indicates an extreme or catastrophic risk you need to tool up. What financial and statutory outcomes could you face by not planning, are you exposed to duty or care to staff, volunteers, customers and the public?

SMART starts with the premise you are exposed, then allows you to define the risks and adverse event triggers and the mitigation to provide a transparent control framework to competently manage your response to future events.

SMART is modelled on traditional supply line methodology developed in the military, and reflects lessons learned from the COVID debacle, where our benchmarks mapped what type of task formed operational bottlenecks as organisations battled to address the pandemic.

Of greatest concern was the lack of preparation of many health & aged care providers as they tried to cope with multiple parallel events:

- Lack of basic information on market sources in the face of collapsing supply chains
- No strategy to source alternative supply, including lack of domestic market options
- The lack of product quality controls was overwhelming, with pirated products and price gouging a common experience.

SMART is global ready enabling you to manage complex emergencies requiring a robust & rapid response.

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SMART Platform