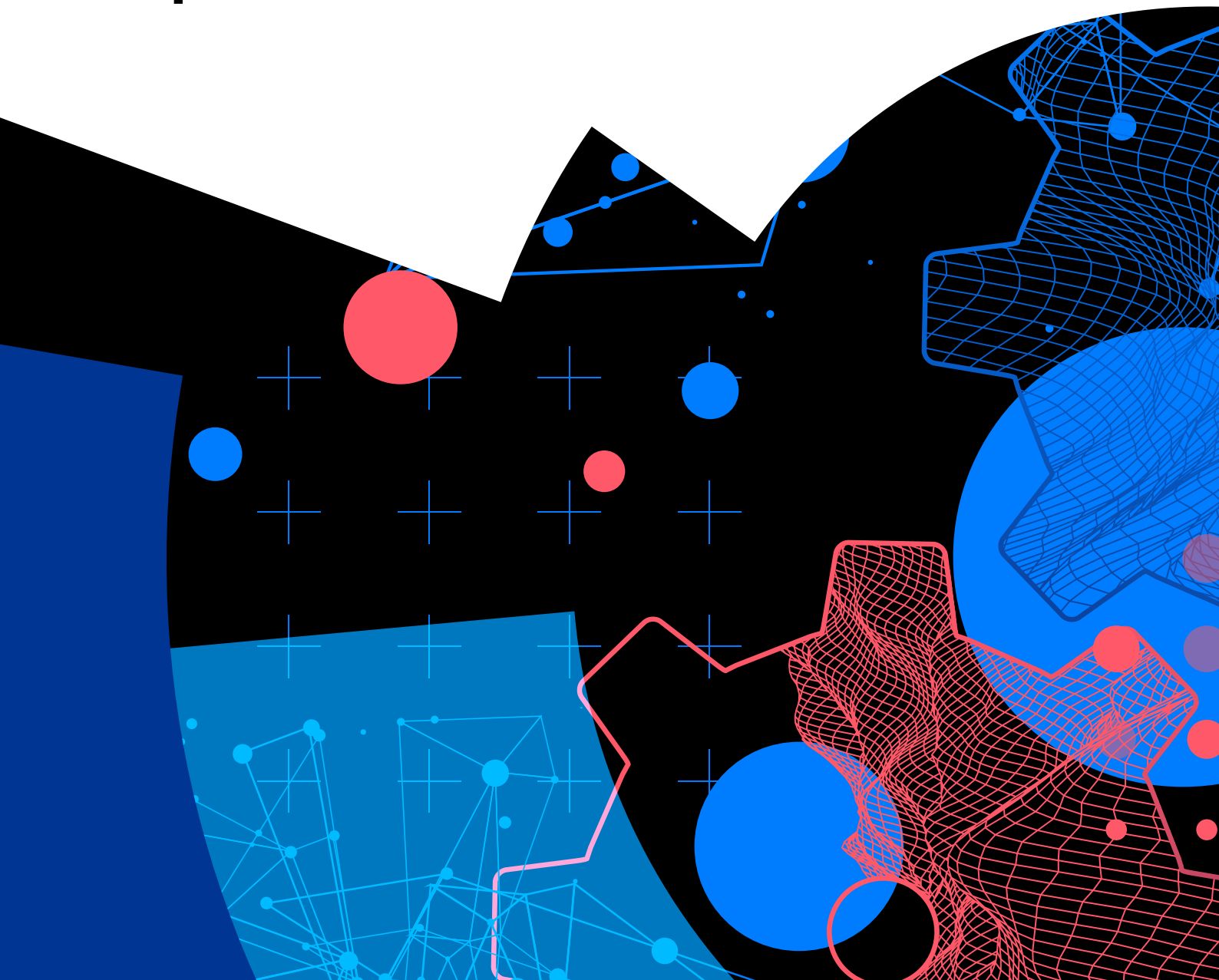


Paperless Trade Pilot Playbook

A practical toolkit





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Introduction

Paperless trade is no longer a distant aspiration; it is today's most practical lever for cutting cost, time, and risk in cross-border commerce.

This playbook distils lessons from real-world pilots and early adopters into an accessible guide that anyone can pick up and use – whether you are in government, banking, logistics, or technology.

Think of this playbook as both a compass and a toolkit:

- The compass points to the six essential steps every pilot must cover.
- The toolkit equips you with checklists, guiding questions, and ready-to-use templates.
- Together, they help you design small but meaningful experiments that build momentum for wider change.

Pilots are powerful because they lower the barriers to starting. Instead of chasing wholesale transformation, a pilot focuses on one corridor, one process, or even a single document. Done well, it demonstrates value quickly and makes the case for scale.

This playbook is designed for a broad community of digital trade advocates:

- Government officials looking to modernise trade facilitation
- Customs and regulators shaping new compliance pathways
- Banks and financiers seeking greater security and efficiency
- Logistics providers and carriers exploring digital documents
- Technology platforms connecting everything together

Organised into **six steps**, this playbook offers a tested sequence of action, from setting objectives and metrics, to implementing and iterating. It guides pilots that are practical, inclusive, and scalable. The goal is not simply to digitise documents, but build towards digitalisation with trust, interoperability, and momentum across the ecosystem.

Step 1: Define vision and objectives

Every successful pilot begins with clarity of purpose. That means asking the right questions upfront:



What problems are we solving, and how does each stakeholder benefit from the solution?



What does success look like six to twelve months from now?



Can we align this pilot to one or more trade-related strategic collaborations that support broader national and regional development goals?

A clear hypothesis not only sets direction but also helps manage expectations about what can realistically be achieved in the early stages.

Objectives should be practical and measurable. For some, it may be about reducing clearance times or paperwork costs. For others, it could be proving that an electronic bill of lading works seamlessly within an existing trade finance process. Ambitious yet achievable goals keep all stakeholders aligned and create momentum for progress.

The vision also needs to resonate with each participant on their own terms. Customs authorities value frictionless enforcement to minimise inspections and clearance times, banks focus on reduced fraud risk and faster settlement, and exporters/importers look for lower costs and quicker turnaround times. As benefits are not uniform, the pilot design must reflect who gains what and how. **By framing value in concrete, stakeholder-specific terms, you build commitment and buy-in across the chain.**

Checklist

- ✓ **Identify** pain points in current trade processes (delays, costs, paperwork).
- ✓ **Define** measurable objectives such as time saved, error reduction, or lower compliance costs.
- ✓ **Quantify** stakeholder value in concrete terms (e.g., faster clearance for customs, lower fraud risk for banks).
- ✓ **Draft** a simple, testable hypothesis about what the pilot is meant to prove within realistic expectations.

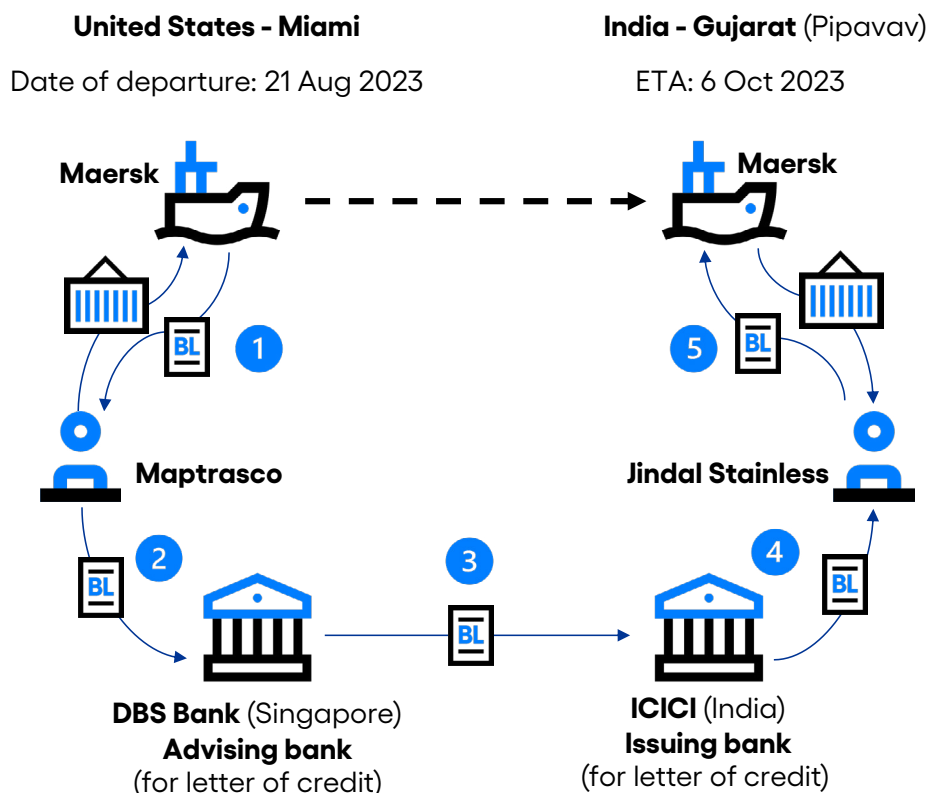
Figure 1: Values to be unlocked in stakeholder-specific terms

Stakeholder	Value
Shipper	Faster payment release
Bank	Reduced fraud risk and improved document accuracy
Customs	Quicker clearance due to electronic data
Buyer	Assured title transfer and faster cargo receipt

Source: ICC DSI (2025), Paperless Trade Pilot Playbook

Before moving from goals to implementation, it helps to visualise how these objectives play out in practice. The following example shows how a paperless transaction can flow end-to-end using interoperable digital documents within a live trade finance scenario.

Figure 2: An illustration of a fully paperless transaction process involving shipper, banks and buyer using the TradeTrust Framework to enable interoperable electronic Bills of Lading (eBLs) backed Letter of Credit (LC) transactions between Singapore and India



Source: IMDA (2023), [Singapore and India kick off an era of interoperable electronic Bills of Lading for Trade Finance](#)

Lesson

Starting with one document and a single trade lane makes the pilot manageable while demonstrating real value to multiple stakeholders.



Step 2: Recruit key stakeholders

Pilots succeed when the right people are at the table. This means identifying both the **essential players** – such as a project lead, technology lead, and compliance expert – and the **value-adding participants** who bring depth, like strategy, communications or marketing. Distinguishing between “need-to-have” and “nice-to-have” roles keeps the pilot lean but adaptable.

Public and private roles are equally important:

- **Government agencies** (trade, customs, finance) provide policy alignment and regulatory assurance.
- **Private sector actors** (exporters, banks, logistics providers, and technology platforms) validate the problem and test solutions.

Securing senior sponsorship early shields the pilot from short-term performance pressures – initial trials may face teething issues or lack economies of scale, but perseverance matters if the end goal is clear.

How you recruit matters as much as who you recruit:

- Tap into the **technical, financial, and operational strengths** of each actor. Use the national committees of the International Chamber of Commerce (ICC) or industry associations as trusted conveners to bridge public–private gaps.
- Facilitate **inclusive workshops** to align objectives, roles, and expectations, and expand the circle as new needs or capability gaps emerge.
- A **shared narrative** – linked to national priorities, ESG goals, or trade facilitation targets – may help sustain resilience and patience even if early key performance indicators (KPIs) are not met, keeping everyone aligned to the long-term vision.



Key questions



Who are the essential stakeholders to align policy, finance, and operational goals?



What expertise or resources are missing from the current group, and how can we fill these gaps?



How can we ensure ongoing engagement and collaboration as the pilot evolves – even if early KPIs may fall short?

Checklist

- ✓ **Map** essential and supporting stakeholders; update regularly throughout the pilot.
- ✓ **Secure** senior sponsorship (director or VP level) to shield the pilot from short-term pressures.
- ✓ **Clarify** roles and responsibilities to foster ownership and long-term commitment.
- ✓ **Leverage** networks (e.g., ICC national committees and industry associations) for outreach.
- ✓ **Facilitate** inclusive workshops to validate processes and uncover missing stakeholders.

Example

An illustration of the important role of senior sponsorship from key stakeholders:

Actors:

- **Customs authority** provides regulatory backing
- **Exporter/importer** defines operational needs
- **Bank** validates compliance and sets LC terms for digital documents
- **Technology provider** enables system integration
- **Senior sponsor** shields pilot from short-term pressures

Value delivered:

- **Public sector** gains faster compliance and policy alignment
- **Banks** benefit from reduced fraud risk
- **Exporters/importers** save time and cost
- **Tech providers** validate interoperability with global standards

Lesson

Recruiting a balanced group early and expanding it as gaps appear creates ownership, resilience and a strong foundation for scaling beyond the pilot.

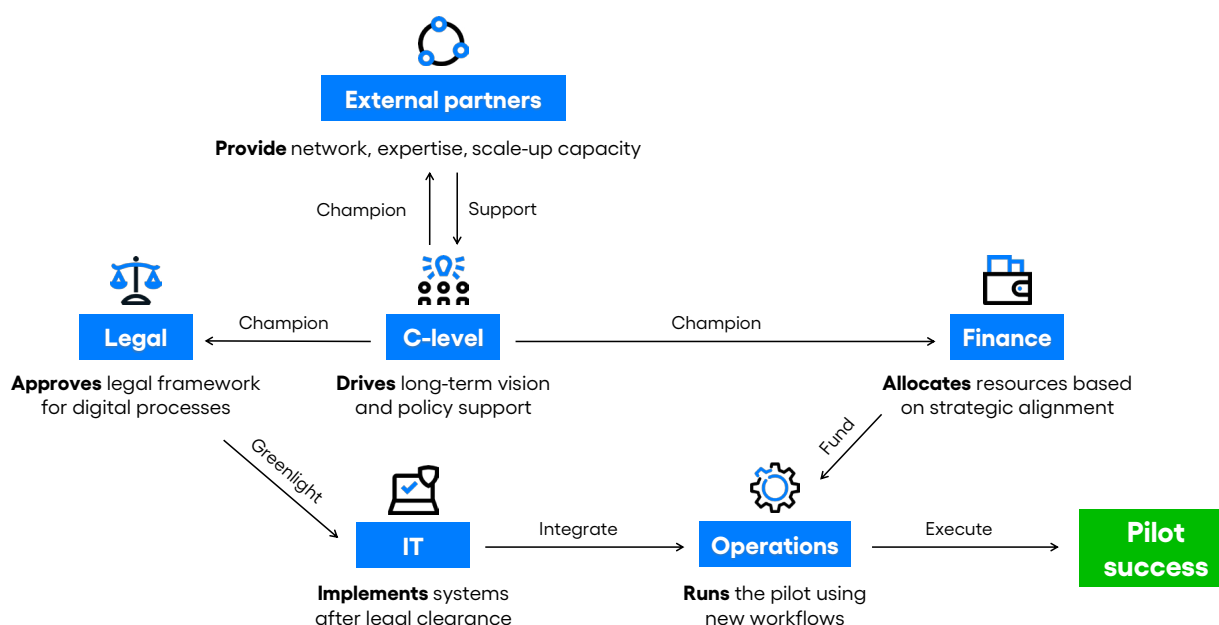


Step 3: Map current trade process

Before designing a future state, you must first understand the present. Mapping the as-is process reveals who does what, when, and with which documents. It highlights bottlenecks, manual interventions and dependencies that slow trade down or increase risk.

The value of process mapping lies in sequencing and influence. For example, legal must approve frameworks before IT can integrate, or customs clearance must precede the release of goods. Understanding these flows shows where to pilot, which stakeholders to influence first, and how to allocate resources effectively. Mapping also supports change management efforts by clarifying who approves, who funds, and who champions the process.

Figure 3: An illustrative map of interdependent stakeholders whose support is essential to pilot success



Source: ICC DSI (2025), Paperless Trade Pilot Playbook

Key questions



What are the most time-consuming or error-prone steps in the trade process, and how can these be digitalised during the pilot?



Which trade processes and documents are critical for the pilot, and what is their current level or mode of digitalisation?



Are existing legal frameworks and technical systems interoperable and compliant with global standards?

Checklist

- ✔ **Run** internal process mapping before external workshops.
- ✔ **Document** workflows, handoffs and data touchpoints end-to-end.
- ✔ **Identify** bottlenecks, redundancies and error-prone steps.
- ✔ **Distinguish** transferable vs. non-transferable documents.
- ✔ **Map** influence flows (who approves, integrates, funds and champions, and in what sequence).
- ✔ **Assess** legal and technical readiness for digital records.

Additional tips for steps 2 and 3

- **Keep stakeholder and process mappings flexible.** They often progress in parallel, so iterate as needed.
- **Use a stakeholder influence map.** Include roles, current state, desired change, level of influence, and timing for engagement.
- **Identify transferable vs. non-transferable documents early.** Legal and operational requirements differ. Even if MLETR is not yet adopted, pilots can proceed under existing contractual laws to demonstrate value and pave the way for future reform.

Step 4: Develop the pilot framework

With vision and process mapping complete, the next step is to shape a clear pilot framework. This means deciding exactly what to test – the corridor, the product, the process, and the document type. A tightly defined scope prevents the project from becoming too broad or unmanageable and provides a structured roadmap to track progress while fostering collaboration and accountability.

A strong pilot framework should do three things:

1. **Define the scope clearly.** Specify the exact trade lane, product type, and process steps to be tested.
2. **Outline milestones and dependencies.** Map out design, build, and testing phases while identifying sequencing dependencies (for example, legal clearance must precede IT integration).
3. **Assign roles and set cadence.** Clarify responsibilities, agree on next steps and establish regular check-ins. This rhythm ensures alignment, transparency and accountability across stakeholders.

Key questions



Which processes, trade documents, and workflows offer the greatest impact and feasibility for the pilot?



What legal, technical, or operational aspects need to be addressed to ensure a successful experiment?



How can roles, milestones and timelines be structured to ensure execution and alignment?

Checklist

- ✓ **Define** a clear pilot scope (corridor, product, process, or document).
- ✓ **Confirm** roles and assign owners with clear deliverables, using a ***RACI matrix** where helpful.
- ✓ **Identify** risks, dependencies, and fallback plans.
- ✓ **Establish** a check-in cadence and track decisions transparently.

Fact box: What is a *RACI matrix?

A RACI matrix is a simple tool for clarifying roles in any project. It maps every task or deliverable to four responsibility types:

R – Responsible: The person who does the work.

A – Accountable: The person who owns the outcome and signs off.

C – Consulted: People who provide input or expertise.

I – Informed: People who need to be kept updated.

Using a RACI matrix early prevents overlap, confusion, and missed responsibilities, ensuring that every stakeholder knows their role in the pilot.

Example

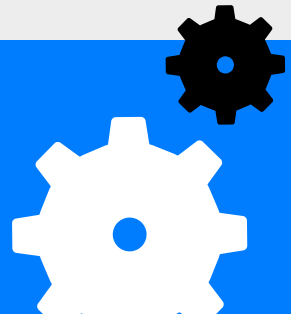
Aligned with the three pillars of a strong pilot framework, an eBL-enabled LC pilot could look like this:

- **Scope definition:** Test the acceptance of eBL under a live LC transaction within a clearly defined trade lane.
- **Milestones and dependencies:**
 - ✓ Legal review completed
(precedes IT integration)
 - ✓ IT integration validated
 - ✓ Training delivered
 - ✓ Pilot launched
- **Roles and cadence:**
 - ✓ Bank manages LC terms and compliance
 - ✓ Shipper issues and endorses the eBL
 - ✓ Carrier validates eBL surrender
 - ✓ Customs reviews electronic clearance
 - ✓ Weekly check-ins scheduled to ensure alignment and accountability



Lesson

Anchoring the pilot in a structured framework with a clearly defined scope, sequenced milestones, and assigned roles builds momentum and credibility, even in complex, multi-stakeholder environments.



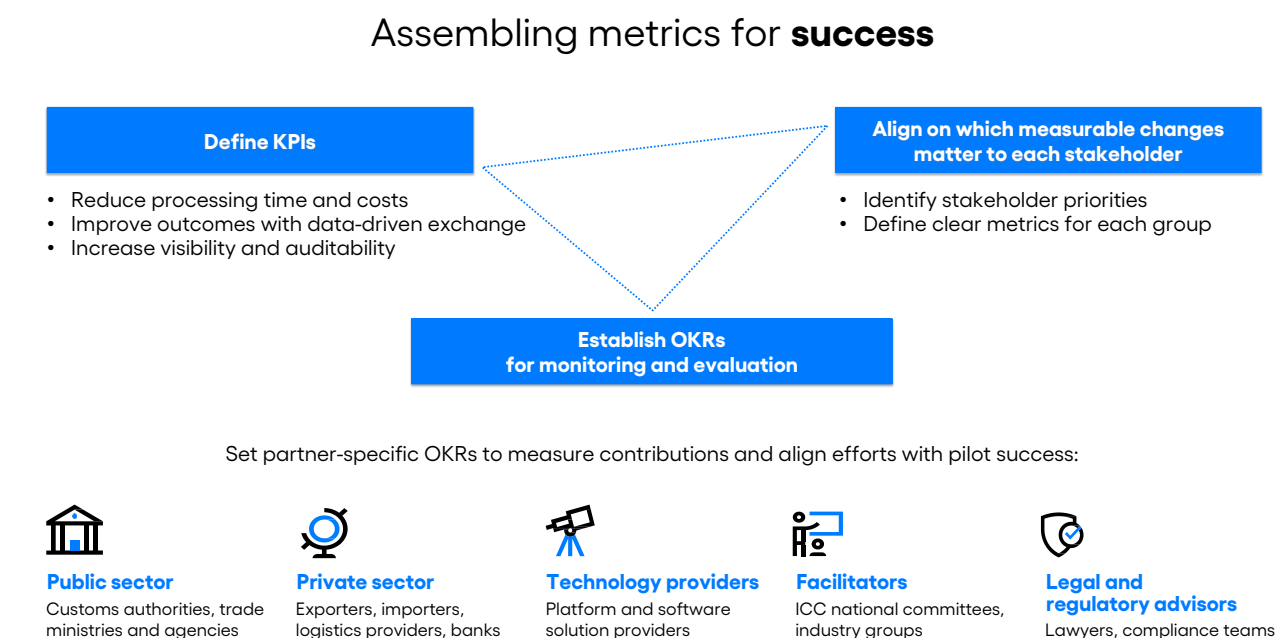
Step 5: Assemble metrics for success

Metrics turn a pilot from an experiment into evidence. They make results visible, credible, and persuasive to decision-makers. A good set of metrics links directly to stakeholder priorities – from faster clearance times to reduced error rates or lower fraud risk.

The purpose of defining metrics is twofold: 1) to guide decision-making during the pilot, and 2) to demonstrate value afterwards. By agreeing on what to measure at the start, you avoid disputes later about whether the pilot “worked”:

- Start with a focused set of **key performance indicators (KPIs)**, such as reduced processing time, lower compliance costs, improved fraud detection, and higher data accuracy.
- Then translate these into **objectives and key results (OKRs)** for each stakeholder group – public sector, private sector, technology providers, facilitators, and legal advisors – so that contributions are clear and aligned.

Figure 4: How KPIs, OKRs and stakeholder-specific priorities need to be aligned



Source: ICC DSI (2025), Paperless Trade Pilot Playbook

Tracking should be simple but consistent. A lightweight dashboard that monitors processing time, costs, error rates, and adoption rates is often enough. The key is not to measure everything, but to measure what matters most to those whose support you need for scaling up.

Fact box: KPIs vs. OKRs

KPIs show *what* is being measured (e.g., reduction in average clearance time).

OKRs link *what is measured* to *why it matters* (e.g., Objective: Improve trade corridor efficiency; Key result: 30% reduction in average clearance time).

Together, KPIs and OKRs ensure pilots track both performance and impact.

Key questions



Will the selected metrics show improvements that matter to each stakeholder group?



Are the selected metrics the most effective for tracking outcomes such as efficiency, cost savings, compliance, and risk reduction?



How will progress be monitored, evaluated, and communicated throughout the pilot?

Checklist

- ✓ **Define** KPIs aligned with stakeholder priorities.
- ✓ **Set** clear OKRs for each group (e.g., customs, banks, exporters, tech providers).
- ✓ **Establish** baselines before launch to measure improvement.
- ✓ **Use** a simple dashboard or tracker for real-time updates.
- ✓ **Assign** metric ownership and reporting cadence.
- ✓ **Share** progress transparently to sustain engagement.

Example

Paperless LC pilot with eBL

KPIs:

- 40% reduction in processing time.
- 20% decrease in documentation costs.
- No fraud incidents.

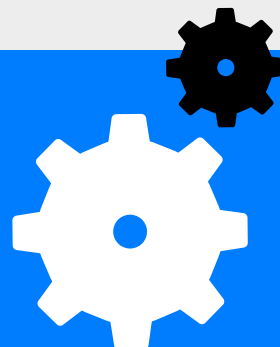
OKRs by stakeholder:

- **Customs:** Less need for inspections with real-time data validation.
- **Banks:** Faster settlement and stronger compliance assurance.
- **Exporters/importers:** Quicker payment and cargo release.
- **Tech providers:** Proven platform interoperability.



Lesson

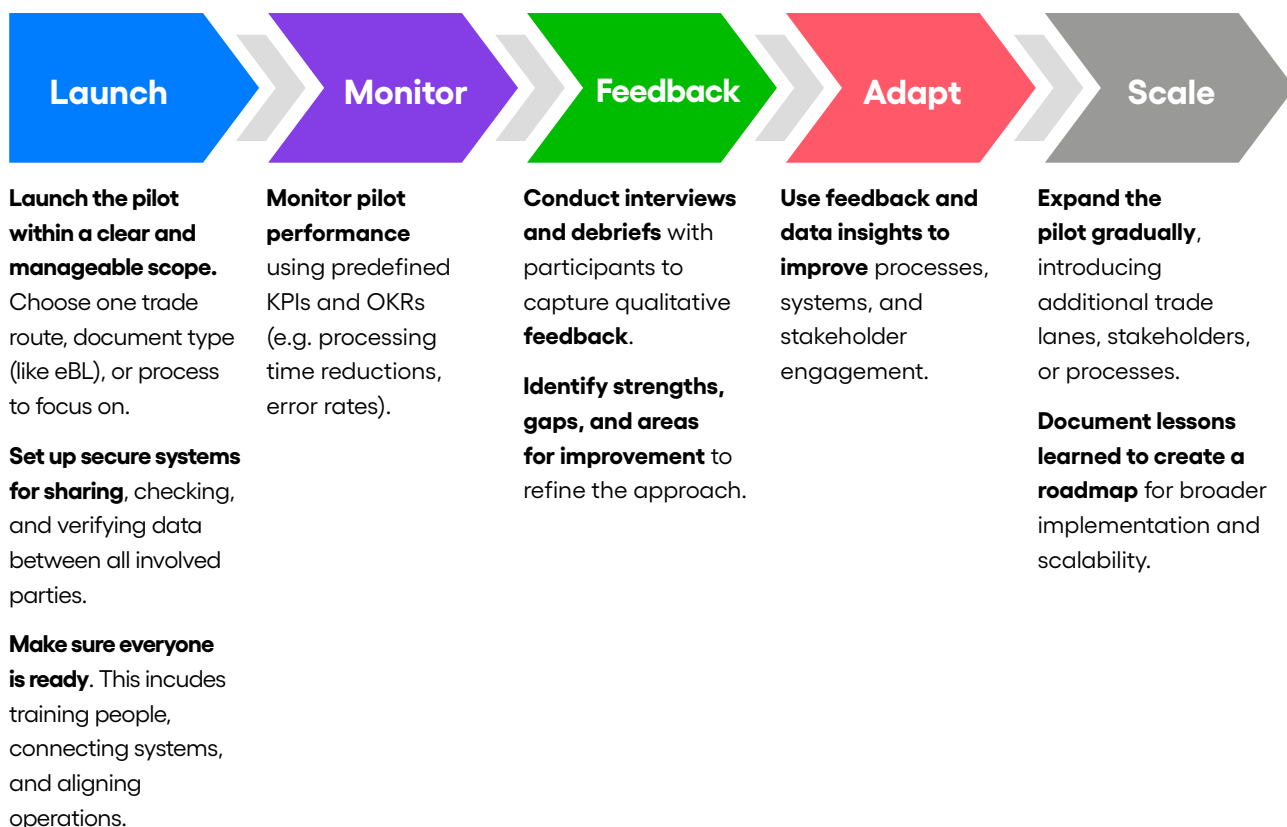
Tracking both efficiency gains and trust outcomes demonstrates systemic value, not just operational savings. When each group sees tangible benefits measured in their own terms, commitment to scale increases dramatically.



Step 6: Pilot and iterate

Launching the pilot is where plans meet reality. Starting small keeps it manageable, for example, a single corridor, one process, or one document type such as an eBL. This focus makes results measurable and reduces risk.

Figure 5: Breaking the pilot down into manageable components



Source: ICC DSI (2025), Paperless Trade Pilot Playbook

Pilots rarely get everything right the first time. That is why iteration is critical. Collect data against your KPIs, run structured debriefs, and capture qualitative feedback from participants. These insights highlight strengths, gaps, and areas for improvement, helping you refine both the process and the technology.

Iteration also lays the foundation for scale. As confidence grows, expand to additional trade lanes, more documents, or wider stakeholder groups. By communicating early wins and lessons learned, you build credibility and momentum for broader adoption.

Key questions



Are all stakeholders clear about the agreed scope and launch criteria?



How will performance data and feedback be collected and used to refine the approach?



What is the plan for adapting and scaling beyond the initial scope?

Checklist

- ✓ **Confirm** readiness of systems, people, and operations.
- ✓ **Monitor** progress against predefined KPIs and OKRs.
- ✓ **Collect** feedback systematically and use it to drive improvement.
- ✓ **Prepare** a roadmap for scale-up once initial success is proven.

Example

Digital Certificate of Origin (eCO) exchange between chamber of commerce, exporter, customs, and importer:

Actors:

- Exporter applies for eCO through chamber system.
- Chamber of commerce issues eCO digitally and shares it with exporter.
- Exporter submits eCO electronically to customs along with other trade documents.
- Importer accesses verified eCO via customs or platform integration.

Value delivered:

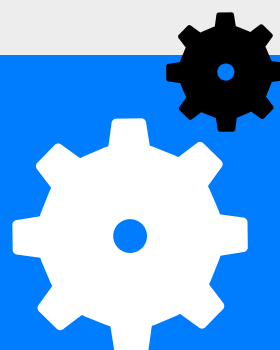
- **Exporter:** Faster certificate issuance, reduced physical visits, quicker submission to customs.
- **Chamber of commerce:** Lower processing burden, improved traceability.
- **Customs:** Early access to authenticated certificates, fewer fraud risks.
- **Importer:** Assurance of product origin, faster clearance and entry.

Iteration cycle:

- **Monitor:** Track turnaround time, error rates, and cost savings.
- **Feedback:** Gather user experience from exporters and customs officers.
- **Adapt:** Refine system integration points, streamline data submission.
- **Scale:** Expand pilot to additional chambers and trade corridors.

Lesson

Iteration allows incremental improvements. By testing one document type (e.g., eCO) in one lane, gaps in legal acceptance, system integration, and user adoption are surfaced and resolved before scaling across more documents and corridors.



From pilot to scale

A pilot is not the end goal – it is the proof point. The real impact comes when lessons are codified, results are communicated, and processes are expanded into the “new normal”.

Scaling requires both technical readiness and stakeholder confidence, built on the credibility of pilot outcomes.

The first step is to capture and share learnings: what worked, what did not, and how obstacles were overcome. Documenting these insights creates a playbook within the playbook – a resource for others in your organisation or across borders who want to replicate success. Communicating early wins – especially in terms of time saved, costs reduced, or fraud risks mitigated – helps secure policy support and executive buy-in.

Expansion should be gradual and strategic. Start by adding more trade lanes, additional document types or a larger set of stakeholders. Align pilot outcomes with national and regional strategies such as trade facilitation goals or MLETR reform. Establish a lightweight governance rhythm – for example, quarterly steering reviews with a shared dashboard – to maintain oversight and momentum.

Checklist

- ✓ **Capture** lessons learned and share them widely.
- ✓ **Translate** pilot outcomes into clear success stories.
- ✓ **Align** results with national or regional trade strategies.
- ✓ **Expand** scope incrementally (lanes, documents, stakeholders).
- ✓ **Create** a governance model to oversee scale-up.
- ✓ **Maintain** stakeholder engagement through transparency and shared wins.

Example

Scaling a paperless trade corridor

- **Phase 1:** Single corridor pilot with eBL under LC terms.
- **Phase 2:** Add second corridor and introduce another document (e.g., Certificate of Origin).
- **Phase 3:** Expand to multi-corridor adoption with customs integration and financing partners onboard.

Lesson

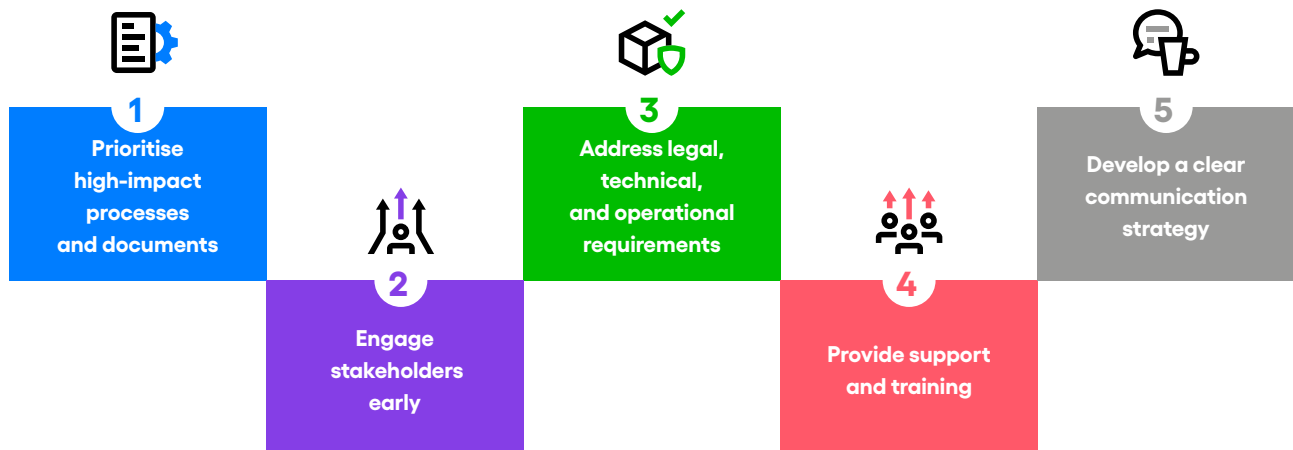
Sustainable scale comes from incremental steps that build trust, rather than a “big bang” transformation.



Tips for project managers

Pilots are as much about coordination as they are about technology. The project manager's role is to hold the pieces together, anticipate challenges, and keep stakeholders engaged.

These five tips offer a practical checklist to guide your work:



1. Prioritise high-impact processes and documents

Focus on workflows and trade documents such as BLs or LCs that move the greatest volume or value. They offer clear, measurable benefits and make it easier to build a case for scaling.

2. Engage stakeholders early and often

Bring both public and private sector partners together from the start. Run workshops to align expectations, surface concerns, and identify champions who can drive adoption within their organisations. Early engagement builds trust and reduces resistance later.

3. Address legal, technical, and operational requirements upfront

Anticipate hurdles. Where laws do not yet recognise electronic transferable records, design workarounds using existing contractual frameworks. Confirm interoperability across systems and ensure compliance with data privacy and security standards.

4. Provide support and training

Equip participants with practical knowledge and tools. Offer hands-on training for frontline users such as customs officers, banks, or logistics providers. Establish a helpdesk or point of contact to troubleshoot issues and maintain confidence.

5. Communicate value consistently

Develop a clear messaging strategy. Highlight tangible benefits like reduced costs, faster clearance, or improved transparency. Use success stories told in the voices of stakeholders to keep momentum alive and secure wider buy-in.

Appendix: Essential tools

Pilots become easier to plan and execute when supported by practical tools. They provide structure, surface hidden gaps, and create a common language for diverse stakeholders.

This appendix highlights three tools you can adapt immediately:

- 1. Business model canvas
- 2. Project frame template
- 3. Key Trade Documents and Data Elements (KTDDE) framework

Use them as working aids in workshops and project meetings. They are not meant to be static. Instead, update them as the pilot evolves.

Together, these tools help keep the pilot grounded in real-world processes, aligned with stakeholder needs, and ready for scale.

Tool 1: Business model canvas to map roles, activities and value propositions

Designed For

Designed By

Date

Ver.

Enablers Key Partners Key Activities Key Resources	Value Creation Problem Solution Value Proposition Unfair Advantage	Customers Customer Segments Channels Customer Relationships
Economics & Validation Cost Structure Revenue Streams Key Metrics		

Source: Adapted from Strategyzer AG (2025), The Business Model Canvas, with modifications by ICC

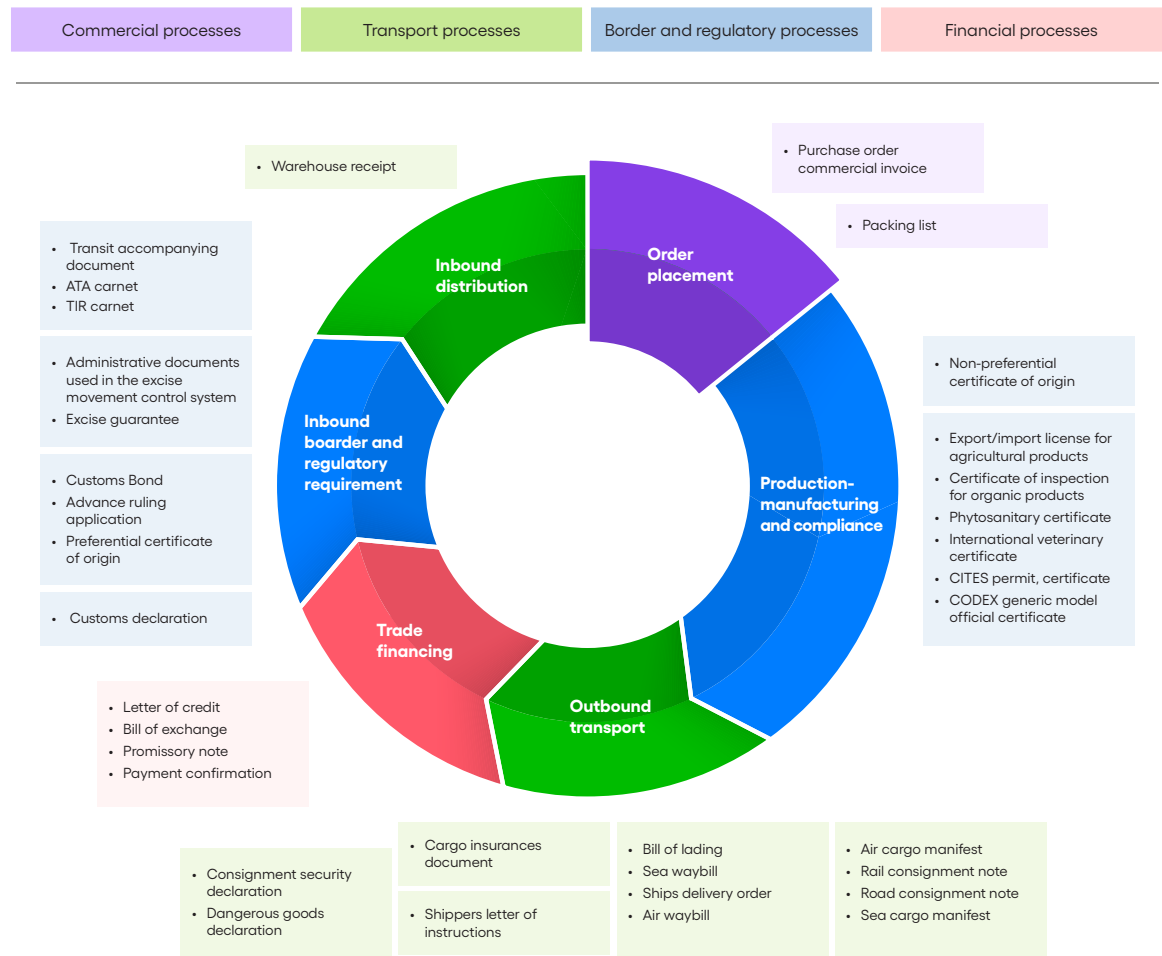
Tool 2: Project frame template to define scope, milestones and responsibilities

<Pilot Title>	Type of Trade (Bulk/Container)			Announceables	Timeline
<Date of Shipment>	Commodity			Name of Event 1	Dates of Event 1
	Load Port			Name of Event 2	Dates of Event 2
	Discharge Port				
	Type of Document(s)				

Engaged Parties (Involved in eBL Transfer)	Carrier	Seller (SG)	Seller's Bank (SG)	Buyer's Bank (IN)	Buyer
Choice of Platform					
Role					
Actions Required on document					

Source: IMDA (2025)

Tool 3: ICC DSI Key Trade Documents and Data Elements (KTDDE) framework to assess the digital readiness of documents



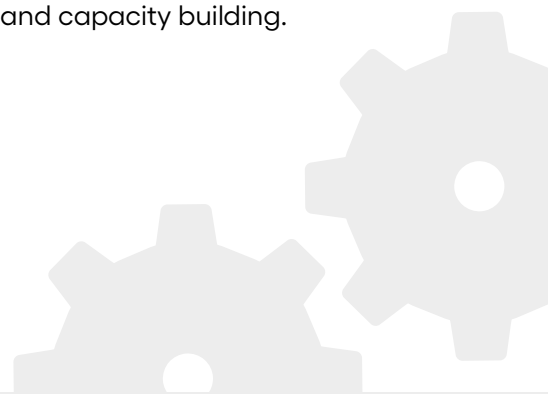
Source: ICC DSI (2024), Key Trade Documents and Data Elements



The International Chamber of Commerce (ICC) is the institutional representative of more than 45 million companies in over 170 countries. ICC's core mission is to make business work for everyone, every day, everywhere. Through a unique mix of advocacy, solutions and standard setting, we promote international trade, responsible business conduct and a global approach to regulation, in addition to providing market-leading dispute resolution services. Our members include many of the world's leading companies, SMEs, business associations and local chambers of commerce.



The Digital Standards Initiative (DSI) aims to accelerate the development of a globally harmonised, digitised trade environment, as a key enabler of dynamic, sustainable, inclusive growth. We engage the public sector to progress regulatory and institutional reform, and mobilise the private sector on adoption, implementation and capacity building.



In collaboration with



The Infocomm Media Development Authority (IMDA) leads Singapore's digital transformation by developing a vibrant digital economy and an inclusive digital society. As Architects of Singapore's Digital Future, we foster growth in Infocomm Technology and Media sectors in concert with progressive regulations, harnessing frontier technologies, and developing local talent and digital infrastructure ecosystems to establish Singapore as a digital metropolis.

The Metals and Mining Digitalization Forum (MMDF) is a working group that was jointly founded by Anglo American, BHP, Rio Tinto and Vale. It seeks a transition from a paper-based and inefficient ecosystem to one that is digital, transparent and verified for buyers, sellers, banks, vessel operators and other value chain participants. MMDF's mission is to propose solutions and assist with the adoption of interoperable digital technologies across the metals and mining supply chain to increase efficiency, transparency, and security and deliver value for all industry participants.