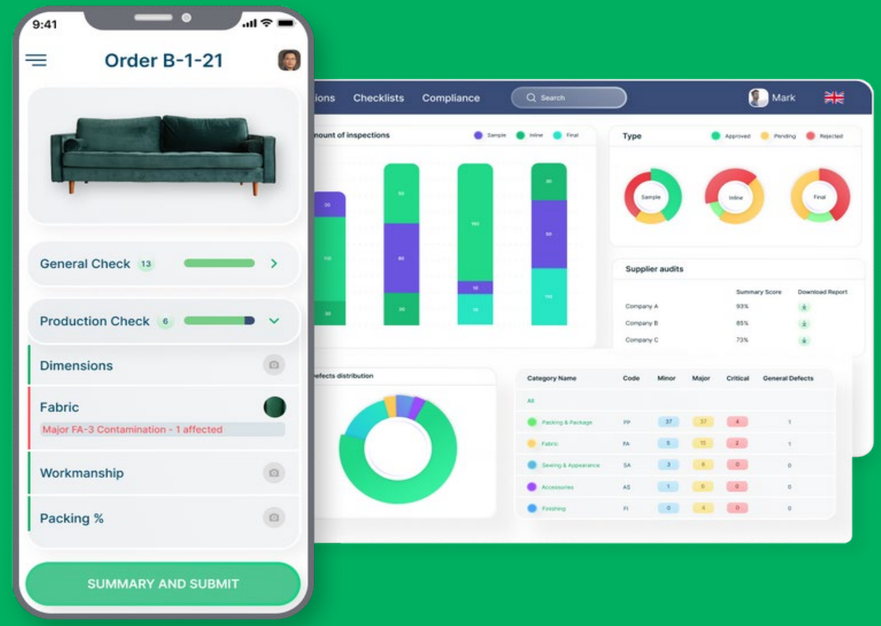
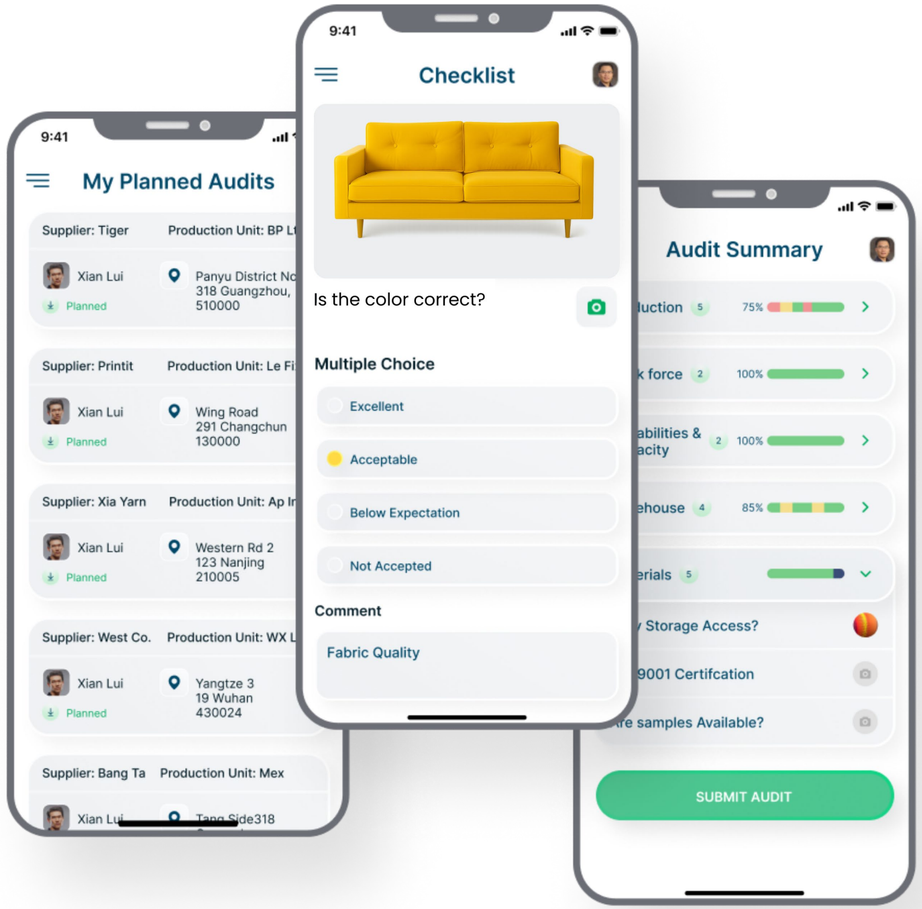
Automating Compliance in Practice

AHFA Regulatory Summit, August 2025
Jacob Nedergaard, CEO at Qarma

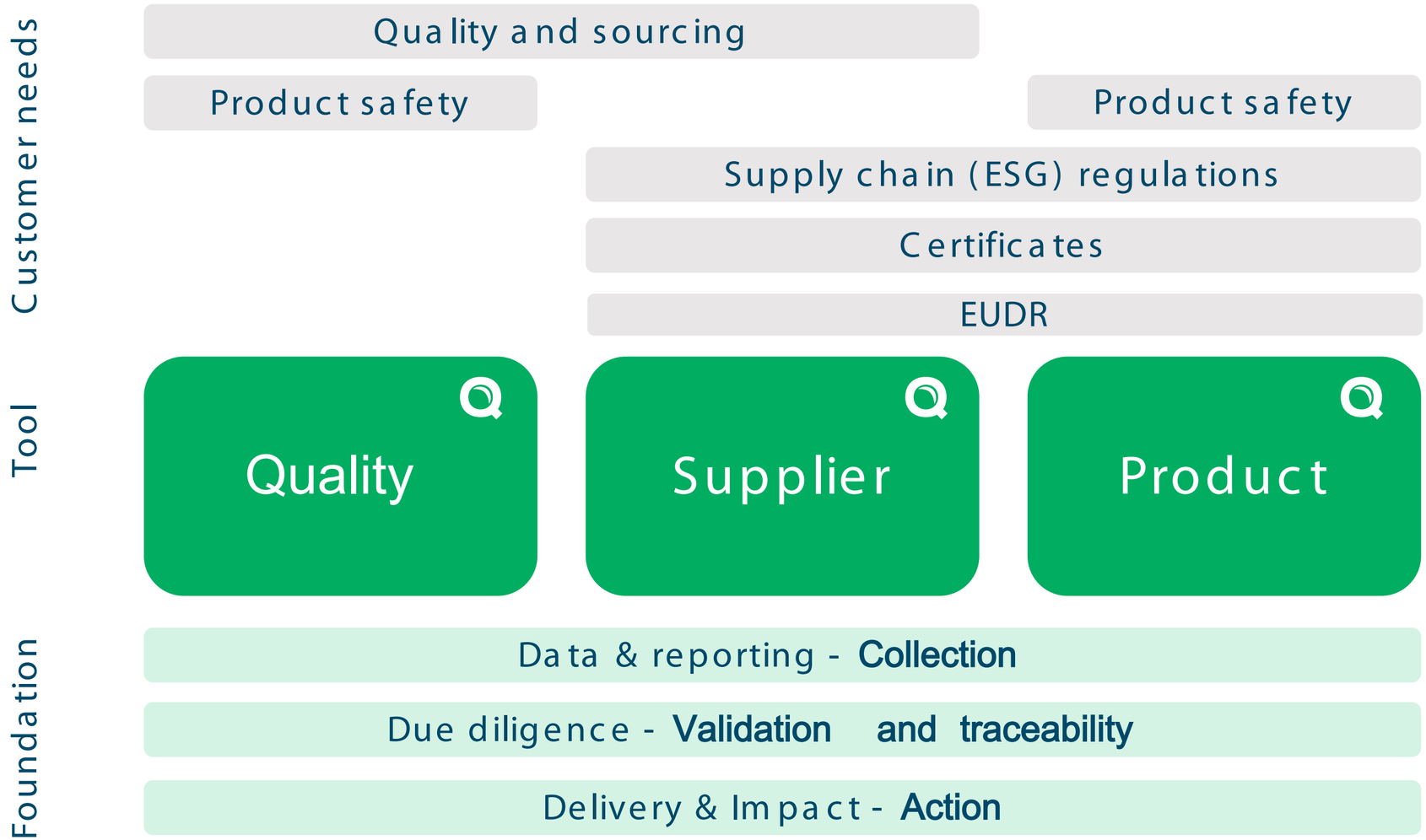


Qarma - A suite of tools made for a complex supply chain



- ✓ Quality & audit App
- ✓ Supplier mgmt. & compliance
- ✓ Product compliance
- ✓ Compliance & governance
- ✓ Real- Time Communication
- ✓ + 25 languages
- ✓ Analytics & performance
- ✓ Seamless Integration

About Qarma


Customer needs
Quality and sourcing
Product safety
Product safety
Supply chain (ESG) regulations
Certificates
EUDR
Tool
Quality
Supplier
Product
Foundation
Data & reporting - Collection
Due diligence - Validation and traceability
Delivery & Impact - Action

Our approach starts bottom up - so it can scale top down

Questions

How many of you use spreadsheets & folders to keep track of requirements and documents?

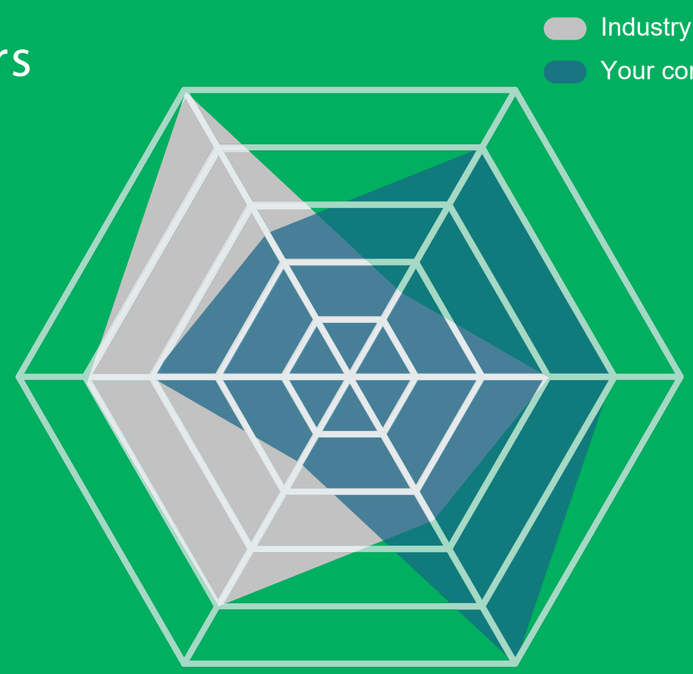
How many collect documents via email?

How many can connect and trace SKU’s, PO and regulations on the spot?

Quality & Compliance Index

Take our assessment and benchmark with peers

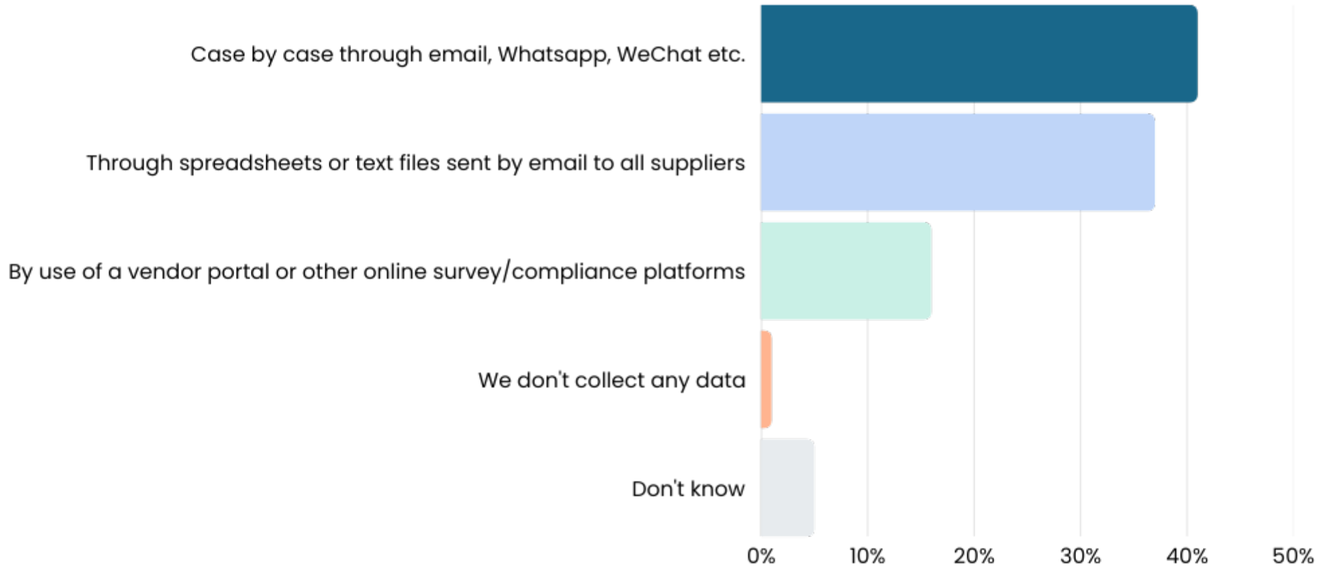
Get your score



Qarma

Qarma Quality & Compliance Index

How do you collect data from your suppliers?



Qarma Quality & Compliance Index

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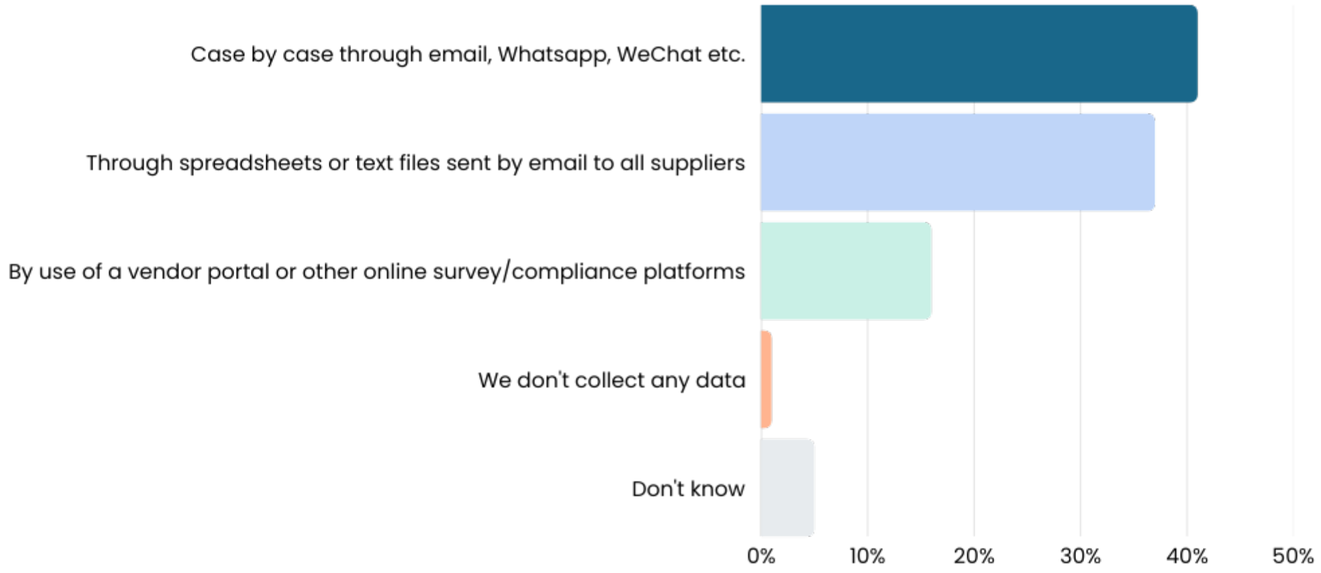
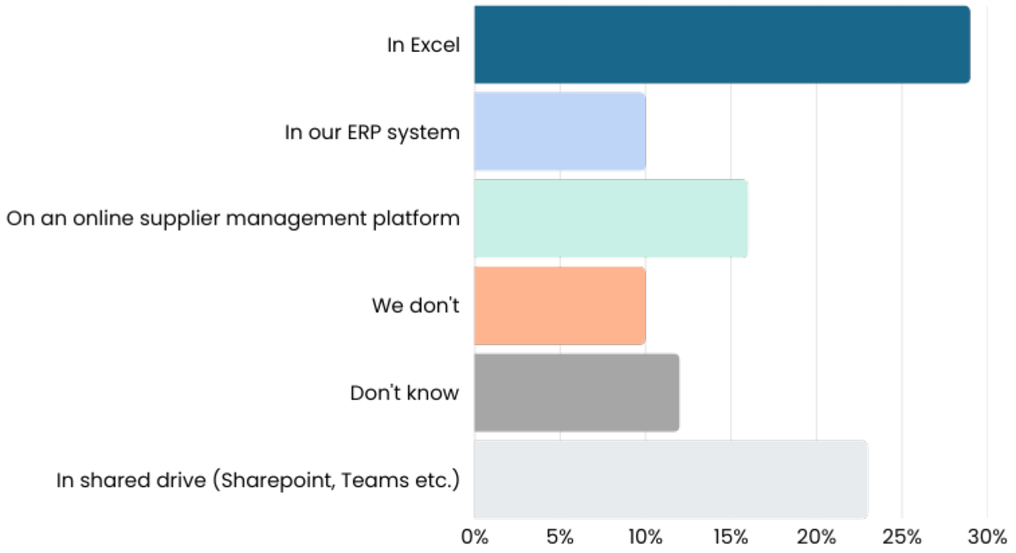
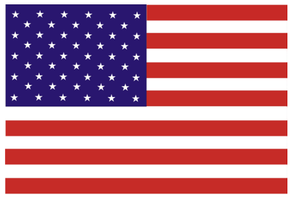


How do you store your compliance data?



Compliance reality



Lacey Act

UFLPA

Prop 65

CPSIA

Customer requirements

Carbon Accounting

EPR

TSCA

CTSC

De- coding Compliance in Practice

```python
def check_epr(packaging: dict, state: str, today: date) -> tuple[bool, str]:
    """
    Check EPR compliance for a packaging item in a given state.

    packaging example:
    {
      "brand": "Furniture Hero",
      "materials": {"plastic", "paper"},
      "registered": True,
      "fees_paid": True,
      "eco_modulation": True   # claimed recyclability improvement
    }
    """
    rules = EPR_STATES[state]

    # 1) Has the law entered into force?
    if today < rules["start_date"]:
        return False, f"EPR in {state} not yet in force"

    # 2) Registration with PRO (Producer Responsibility Organization)
    if rules["must_register"] and not packaging["registered"]:
        return False, f"Not registered with PRO in {state}"

    # 3) Materials covered
    for m in packaging["materials"]:
        if m not in rules["reporting_materials"]:
            return False, f"Material {m} not reported in {state} EPR system"

    # 4) Fee payment
    if rules["fee_required"] and not packaging["fees_paid"]:
        return False, f"Eco-fees unpaid in {state}"

    # 5) Eco-modulation (bonus logic: some states reduce fees if packaging is recyclable/
    if packaging.get("eco_modulation") is False:
        return False, f"No eco-modulation measures claimed (higher fees may apply)"

    return True, f"{packaging['brand']} is EPR-compliant in {state}"

# --- Example ---
furniture_pack = {
    "brand": "Furniture Hero",
    "materials": {"plastic", "paper"},
    "registered": True,
    "fees_paid": True,
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print(check_epr(furniture_pack, "California", date(2027, 5, 1)))
```

It all start with

if...

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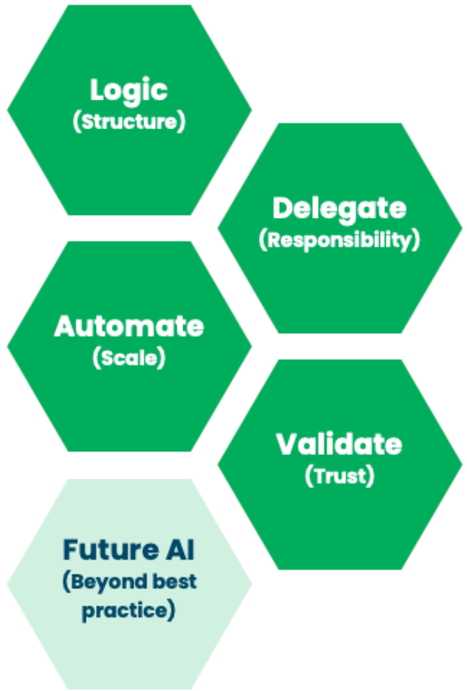
“Configuring” teams, suppliers, processes & solutions/tools

Manage data and documents everywhere applicable

Repeat tasks are meant to be automated to **save time and efforts**

Systems that work for you, to process and analyze information – **train the trainer**. It only gets better every day.



Enroll and engage with suppliers so they take responsibility

Validate data, tasks, people and **context**

Closing Compliance Gaps

Define documentation requirements

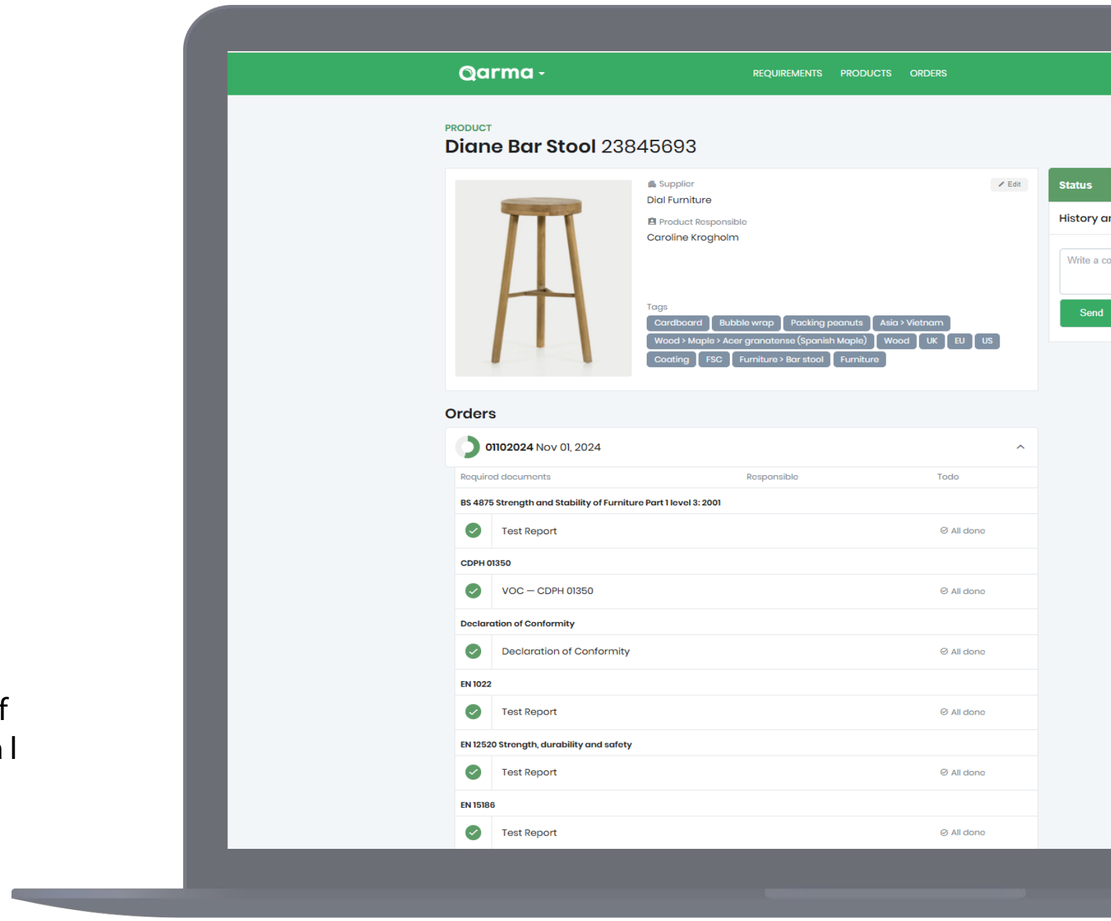
Integrate with your product system(s)

Automatically assign documentation requirements to POs

Request documents directly from partners

Validate and approve

System keeps track of expiration and renewal



Demo

Product compliance then, now & next

	Where we're coming from	Where we're at	Where we're going
Processes	Reactive compliance checks; safety tested late in cycle; paper-heavy audits *Challenge: Late detection of non-conformities; costly recalls*	Proactive testing integrated earlier; standardized QC & lab protocols; digital certificates *Challenge: Long testing lead times; inconsistent supplier adoption*	Predictive monitoring; virtual testing (digital twins); continuous compliance integrated with design *Challenge: Ensuring validity of AI/virtual testing vs. physical tests*
Systems	Standalone spreadsheets; siloed reporting of test results *Challenge: Poor tracking of test results; missing history in recalls*	ERP/QMS + lab integration; digital compliance dashboards *Challenge: High integration costs; complexity across labs and suppliers*	Integrated compliance ecosystems; automatic regulatory updates; digital product passports *Challenge: Cybersecurity risks; ensuring system interoperability*
People	Compliance seen as policing; low awareness in design & sourcing *Challenge: Designers & buyers unaware of safety implications*	Cross-functional role (design, sourcing, QC, compliance); training programs *Challenge: Skill gaps; silo mentality; balancing cost vs compliance*	Compliance as shared responsibility; safety-by-design mindset across organization *Challenge: Shortage of experts in chemical safety & advanced testing; cultural buy-in*
Technology	Basic testing databases; email reports *Challenge: Limited scalability; data loss*	Digital QC apps; lab automation; IoT sensors for mechanical testing *Challenge: High adoption costs; fragmented systems*	AI-based defect detection; digital twins for testing; automated reporting *Challenge: Validating AI-driven compliance; keeping pace with regulation vs tech*
Data	Scattered test reports; non-digital lab outputs *Challenge: No audit trail; missing records in recalls*	Centralized test records; digital certificates of compliance *Challenge: Trust in supplier-provided data; ensuring accuracy*	Real-time monitoring data; predictive compliance analytics *Challenge: Data overload; validating predictive models; AI trustworthiness*

Qarma


wayfair®

Recap

- **Start bottom up** – compliance is not a desktop exercise
- Connecting compliance and PO/SKU is **multi - dimensional**
- Build the **struture and logic** (baseline & “tagging”)
- **Delegate** to suppliers
- **Centralize** all data in one place/interface
- Look for “repeat” tasks to be **automated**

Thanks

EUDR- European Deforestation Regulation

Prohibits products that are associated with deforestation and forest degradation, and which have not been produced according to the relevant laws of the country of production.

Key requirements

- Mandatory Due Diligence System
- Collection of GPS coordinates for harvesting
- Documentation to demonstrate compliance and risk mitigation
- Submittal of due diligence statements (DDS) to official registry

Commodities affected

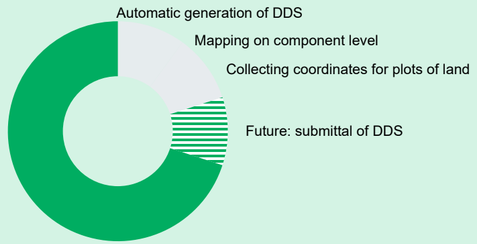
EUDR with Qarma

Practice due diligence with Qarma Audit and Supplier Compliance tool

- Collect data on suppliers and points of production directly from suppliers with the audits feature
- Mitigate findings with the one - click corrective actions feature
- Create and export audit reports
- Collect GPS coordinates with audits

Collect and store documentation in one place with Qarma Product Compliance module

- Automatically assign documentation requirements to products based on your requirements library
- Collect documentation directly from suppliers and store on the product and order
- Let the system remember expiration and renewal dates and request new documentation in due time



Compliance going forward

Automated compliance

Suppliers & brands are connected

Compliance embedded in workflows

Live compliance

Supplier self - service

Predictive compliance management

Dynamic compliance passports

From burden to business enabler

AI vs BI vs The Eye

	AI	BI	Eye
Use cases	• Automation of manual tasks • Risk prediction • Capture deviation	• Supplier performance • Inspector performance • Product performance • Supplier rating and KPI tracking	• Human look & feel • Subjective and contextual judgement
Processing	• Pattern recognition, and prediction of large dataset • Extract and structure	• Identifying recurring trends • You define the KPI's /metrics and assumptions	• Perception, experience & intuition
Accuracy	• High accuracy	• Dependent on data quality and analysis	• Inconsistent (depends on inspector experience/skills)
Strength	• Scalability • Strong sanity check	• Combines data from multiple sources • Tracks KPIs like defect rates, supplier etc. • Good for benchmarking • Actionable insights	• Contextual decision making
Weakness	• We don't operate in a consistent environment. Production is not sufficient automated • Large datasets (not a fit for small batches) • Missing context	• Requires structured and accurate input data	• Human bias • Small-scale, localized contexts

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