



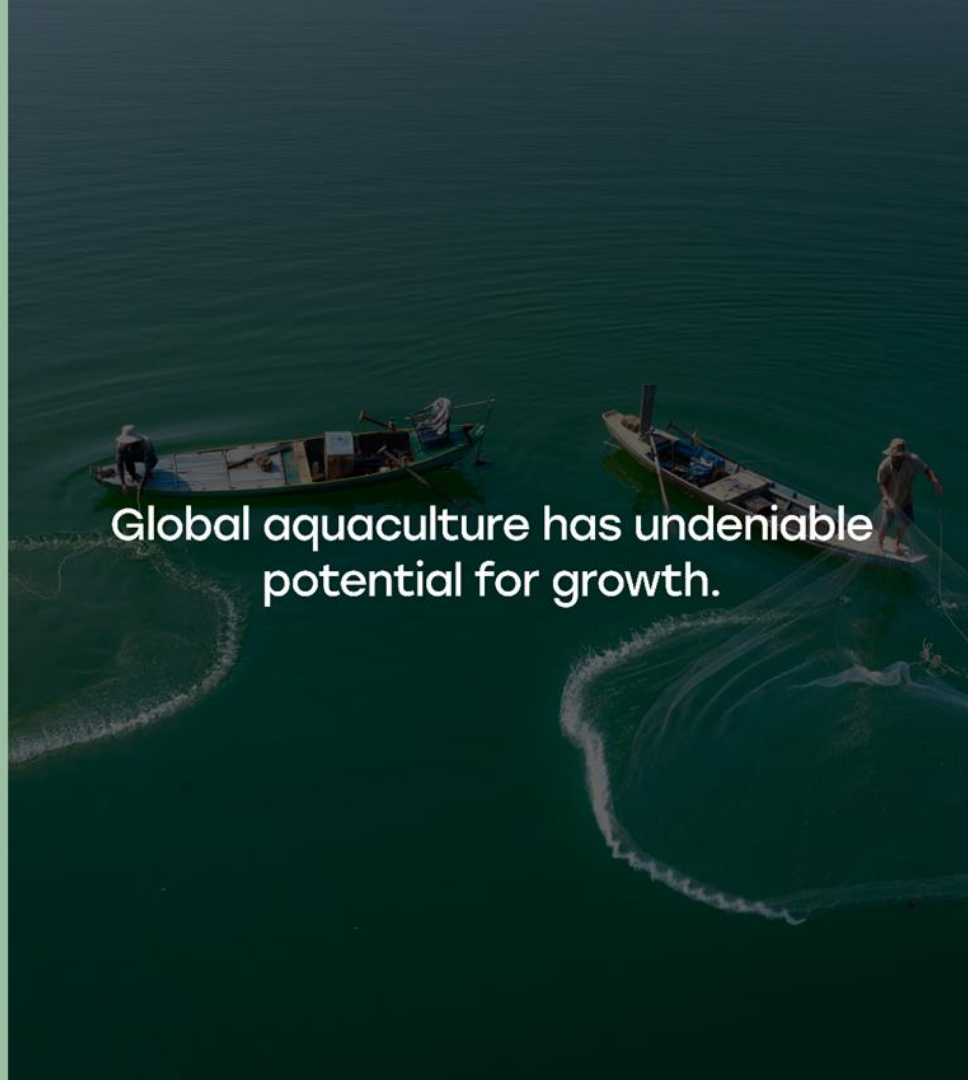
The aquaculture of the future:
increasing efficiency through
information technology



01

Margin
Compression

Global aquaculture has undeniable
potential for growth.



Business Challenges

Producers generally fail to mitigate and quantify risk before passing those risks on to the counterparts they work with leading to value transfer and diminishing margins.



PRODUCERS

- Margin compression
- Access to affordable financing and insurance products
- Technology and infrastructure investment
- Disease pressure leading to depressed performance and crop failures.

FEED MILLS

- Margin compression
- Increasing bad debts (when producers fail to pay)
- Risk assessments - lack of performance data and insights
- Difficulties reporting on sustainability (scope 3)



FINANCIAL SERVICES

- Risk assessment tools
- Limited industry connection
- Lack of historical data and timely insights.
- Difficulties assessing real-time risk, creditworthiness and viability of borrowers

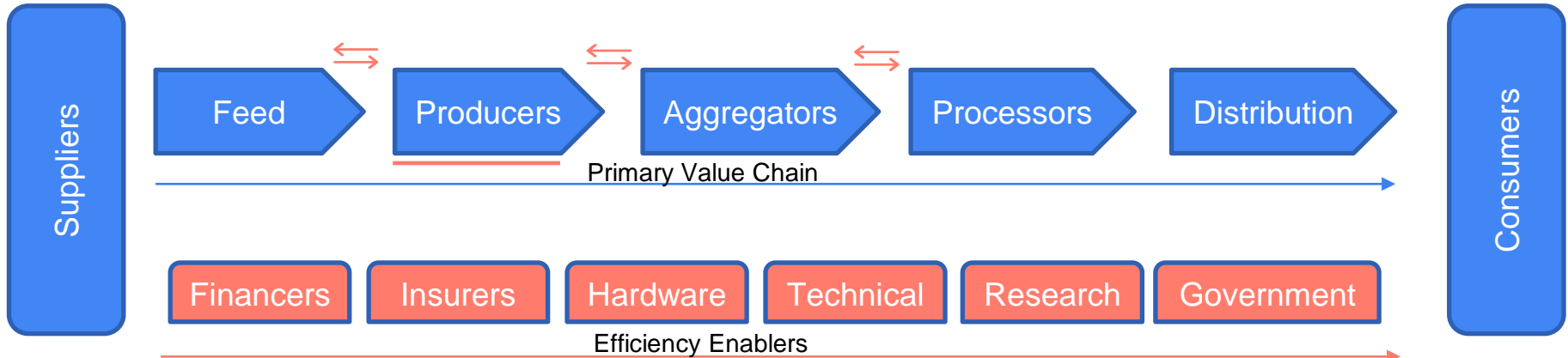
How to improve value chain efficiency & margins

- Margin improvement needs to come from efficiencies within the value chain.
- Greatest opportunity for margin gains resides in the production process.
- These efficiencies can be easily modelled benchmarked.
- Structured data and articulating performance and risk management is critical.
- Without improved data, we are not going to change the status quo.



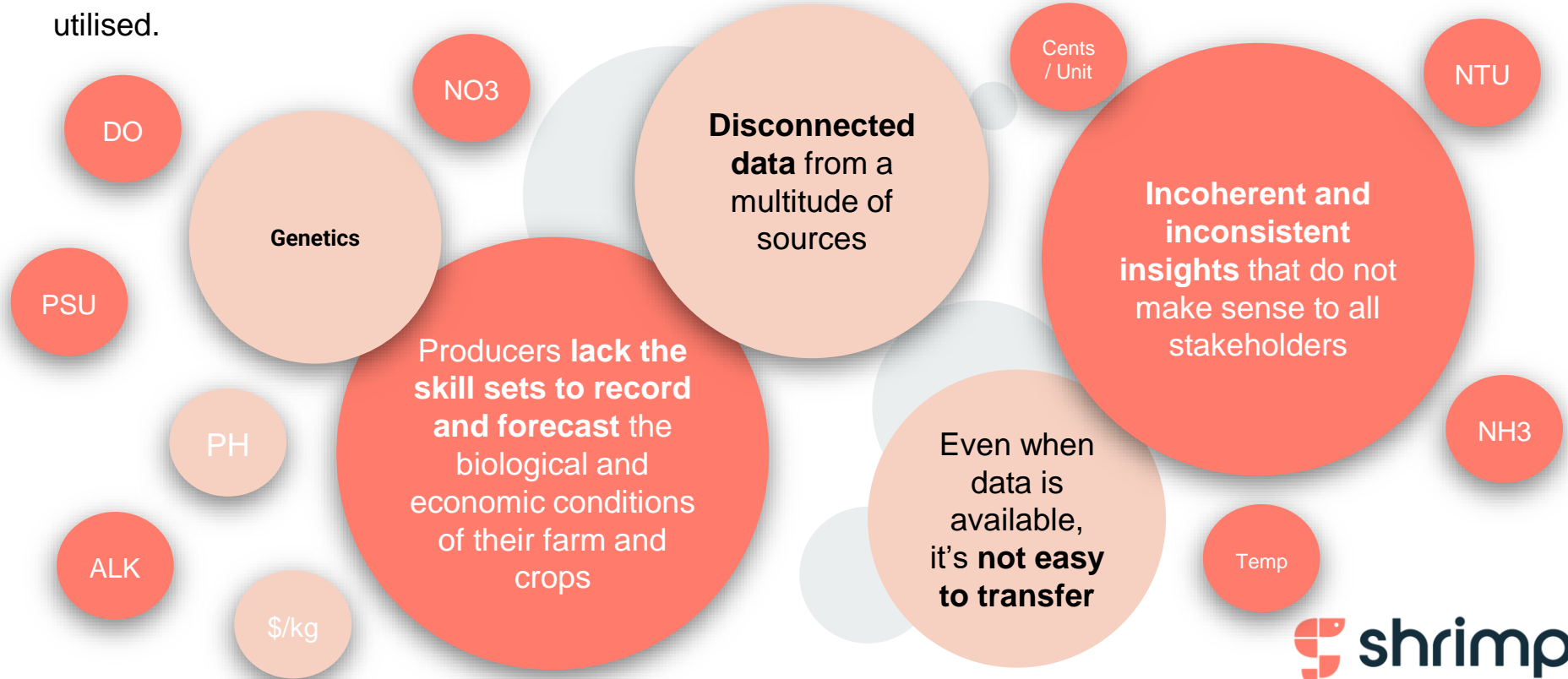
Creating Margins: Unlocking efficiencies

- Move away from **value transfer** along the value chain to **value creation and retention** within it.
- Stakeholder efficiency
- Transaction efficiency



Data, centralisation and Connectivity

Aquaculture businesses collect abundant data, but it often remains segregated, untapped and poorly utilised.



Extracting Value - where's the money!!

01 Data Collection

Data collection solutions for aquaculture are advancing to encompass a previously unattainable amount of data.

02 Data Management

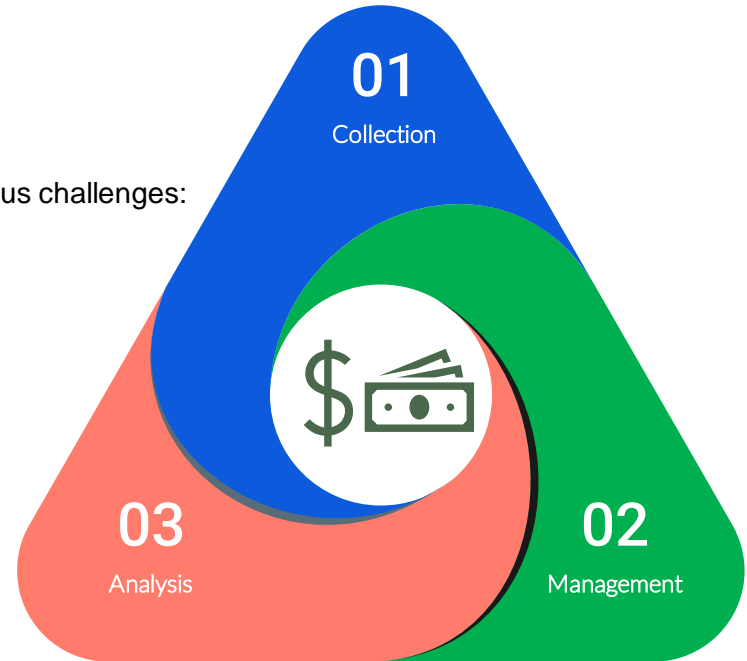
Cloud-based software solutions can now overcome previous challenges:

- Volume (size)
- Variety (structured/unstructured)
- Velocity (speed of data)
- Veracity (reliability and predictability of imprecise data)

03 Data Analysis

Statistical methods and technologies for analysing data in order to gain insights.

- Descriptive Analytics – What has happened.
- Predictive Analytics – Probabilistic methods, what could happen.
- Prescriptive Analytics – The best option for the given situation.



03

The Solution

Predictive and Prescriptive Analytics

How can aquaculture thrive amidst risks and challenges?



Reporting, benchmarking and improving

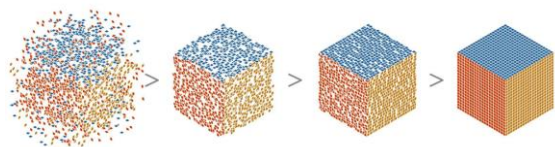
To integrate with traditional service providers as an industry aquaculture needs to focus on structured and standardised data architectures and protocols.

- Genetics
- Seed densities / loading capacity
- Disease management
- Feeding (FCR)
- Growth rates
- Survival
- Water quality
- Energy use
- Supplier terms
- Carbon footprint
- Finance costs
- Harvest timing
- Harvest sequence
- Labour optimisation
- Sales timing
- Pathogen loads
- Cost per Kg
- Margin / Kg



The future of aquaculture

How do we go from now to next?



NEXT-GEN AQUACULTURE

relies on **real-time data, precision farming, predictability, and connection** to drive success.

It's about **benefiting all stakeholders in the value chain**, because when everyone gains, industry efficiency grows.

