



Global Shrimp Production:

Leveraging Technology
to Increase and Drive Aquaculture Growth

Data-driven

Sustainable

Connected





Agenda

- 01 Aquaculture Industry in Technology Transition
- 02 Industry challenges
- 03 Integration of data and optimisation of technologies
- 04 Connected Data Systems: Command and Control
- 05 Other Stakeholders Feed mills and Financial Services



Industry in Technology Transition

The Industry Today vs Tomorrow



Small Holder Production

Aquaculture 1.0

Production is highly fragmented, heuristic, and suboptimal processes resulting in poor environmental and financial outcomes.



Equipment Mechanisation

Aquaculture 2.0

Characterized by basic mechanization, minimal and inconsistent data collection, and primarily heuristic management practices.



Singular Automation

Aquaculture 3.0

Single asset automation has improved data collection but remains isolated. There is a lack of data fusion and interoperability needed for advanced analytics.



Connected Integration

Aquaculture 4.0

Connected hardware with standardised, data source-agnostic centralised structures. Multilayered advanced descriptive, predictive, and prescriptive analytics and reporting, facilitating seamless inter-industry integration."



Shrimpl provides centralised data integration for command and control, ensuring secure data management and advanced enterprise analytics solutions for detailed operational, financial and sustainability modelling.

02

Industry challenges to scaling production and technology adoption

Industry Challenges

Producers



Production and resource inefficiencies



Environmental sustainability and regulatory pressures.



Labour limitations and productivity constraints.

Feed Mills



Supporting client's success and risk exposure reduction



Enabling increased client efficiency and performance with synergistic risk reduction solutions.



Supply Chain Sustainability and Traceability (Scope 3 Reporting)

Service Providers



The unique risk nature of shrimp farming is unfamiliar



Data and Transparency Challenges

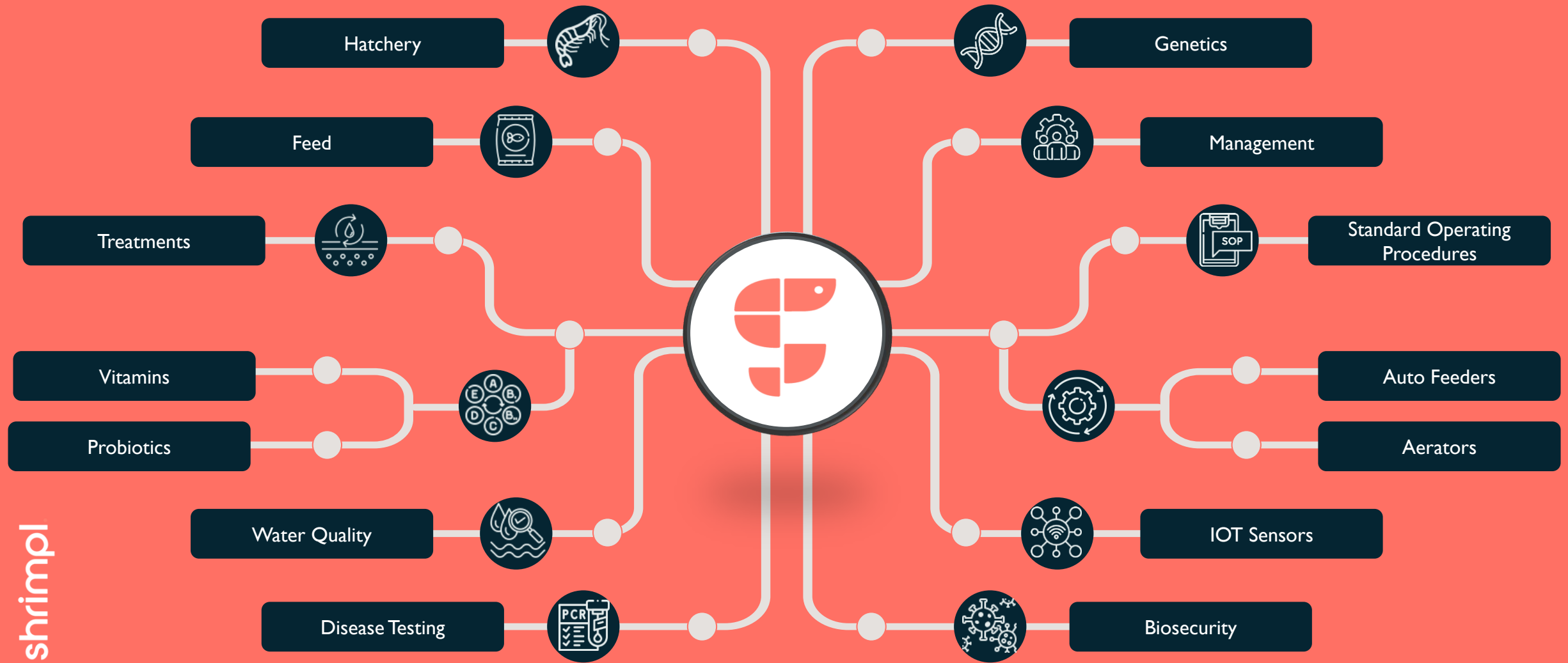


Sustainability and Compliance Pressures

03

Data integration and optimisation of technologies

Producers: Centre of the data universe



Integrating and optimising: Available Technology



Genetics



Disease Detection



Nutrition



Feed Application



Environment Monitoring



Data Integration



Equipment & Process
Optimisation



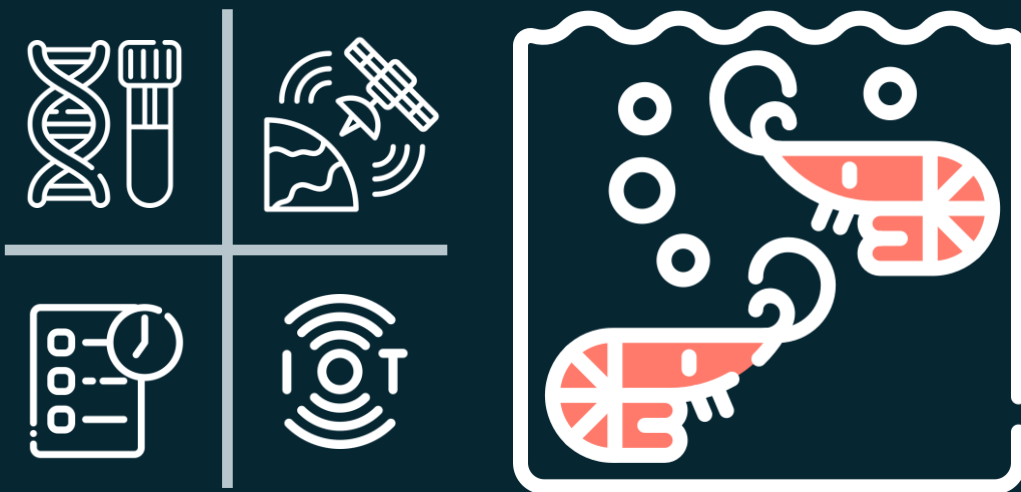
Connectivity & Transaction
Enablement

04

Centralised Analytics: Command and Control

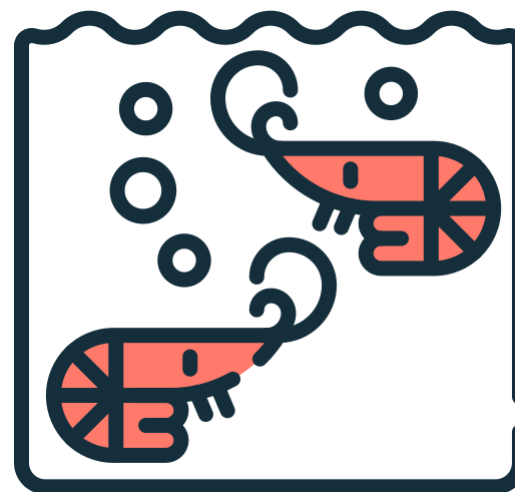
Digital Twin

Digital Twins - a technology that provides virtual models mirroring physical systems, is transforming the shrimp farming industry with unparalleled data integration and analysis. They are becoming a cornerstone of modern aquaculture, providing insights into their myriad benefits and the future they're shaping. At Shrimpl, we have embraced the concept of digital twins from our very beginning, always taking a highly scientific approach, working with the best in research and practice. Systems Theory is at the core of the Shrimpl platform.

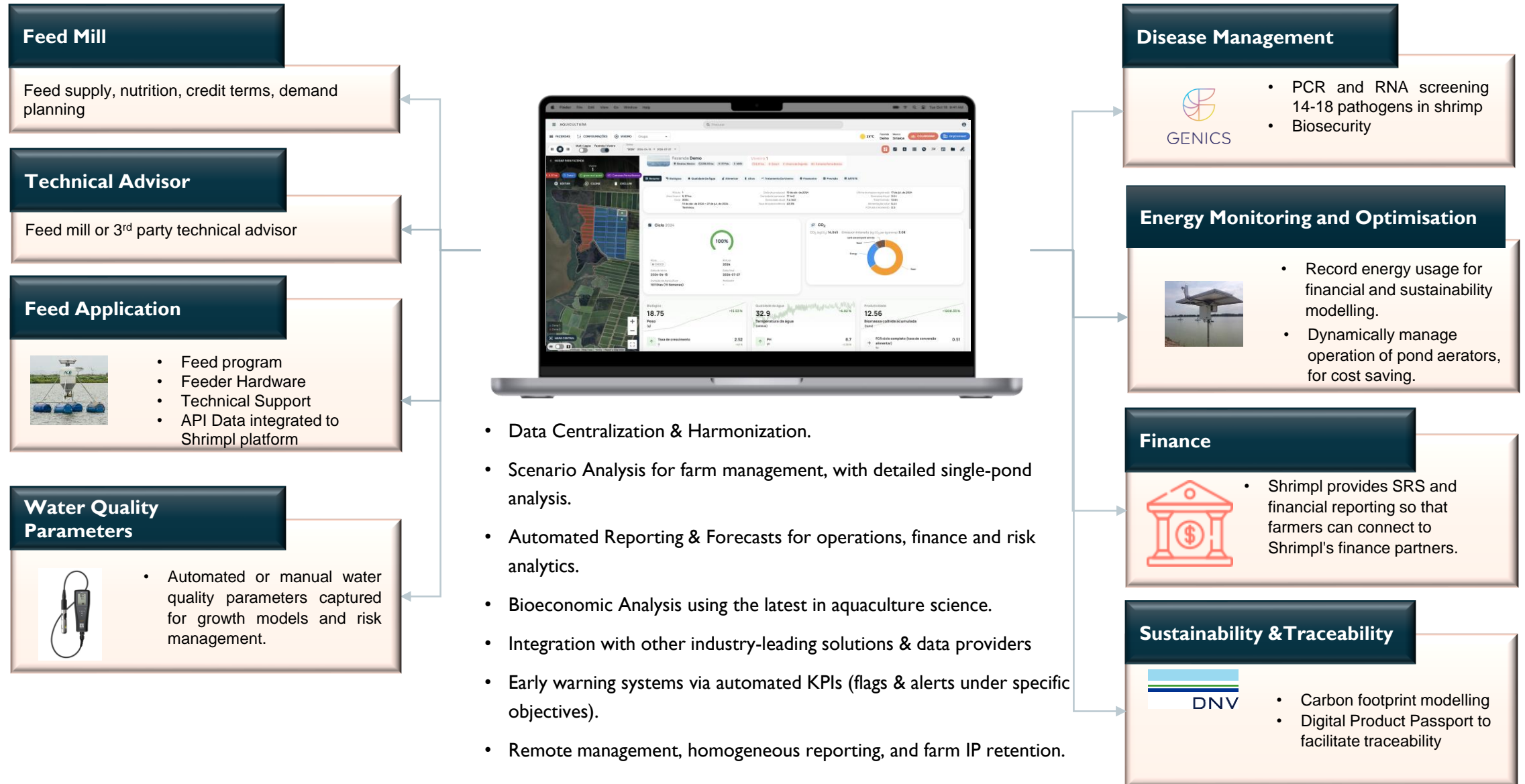


Through advanced simulation and modelling, farmers can model different biological and financial scenarios, allowing for a farm or pond-specific approach that meets the specific needs of their shrimp populations.


- Capital Requirements
- Cashflows
- Profitability
- Production Volumes
- Partial and Full Harvest Events
- Disease Impacts
- Carrying Capacities

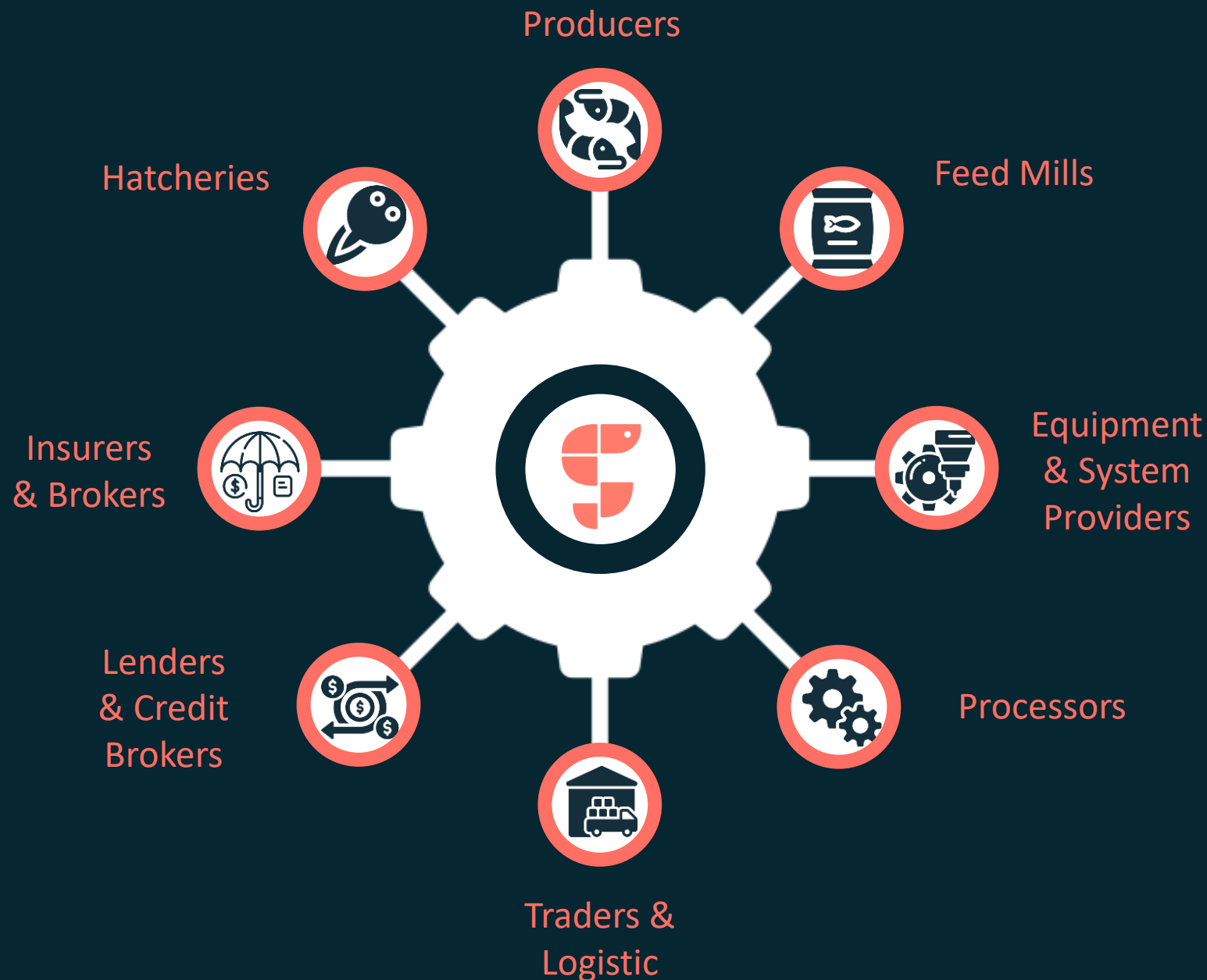


Connected Data Systems – Command and control



"Your data is your unique power and differentiator."

 Your data is your 'master key' to unlocking an ecosystem of financial services that add value through margin optimisation and risk mitigation.



Important Considerations



Data Ownership

- Clearly defined data ownership
- Data access and retrieval
- Transparency of data sharing access
- Proper authorisation and consent for utilising or sharing of data.



Data Security

- Know where your data is stored
- How is the data secured? Is it encrypted?
- Are user permissions, authentication and access controls in place
- Data backup and recovery processes



Data Utilisation

Operational Optimisation

- Real-time analytics, performance monitoring, cost analysis, and resource optimisation.

Predictive and Prescriptive Insights

- Scientific growth models, feed models, disease prediction/detection, and market analytics.

Early Warning systems

System alerts, anomaly detection, and risk assessments.

Benchmarking and Reporting

- Performance benchmarking, compliance reporting, harvest prediction and optimisation.

Business and Strategy Planning

- Profitability Insights, scenario analysis, optimisation

OS

Other Stakeholders

Technology & Data Enablement



FEED MILLERS

- Production Forecasting & Planning
- Improved Customer Engagement
- Market Connectivity & Sales Optimization
- Sustainability & Transparency
- Risk monitoring, mitigation and management



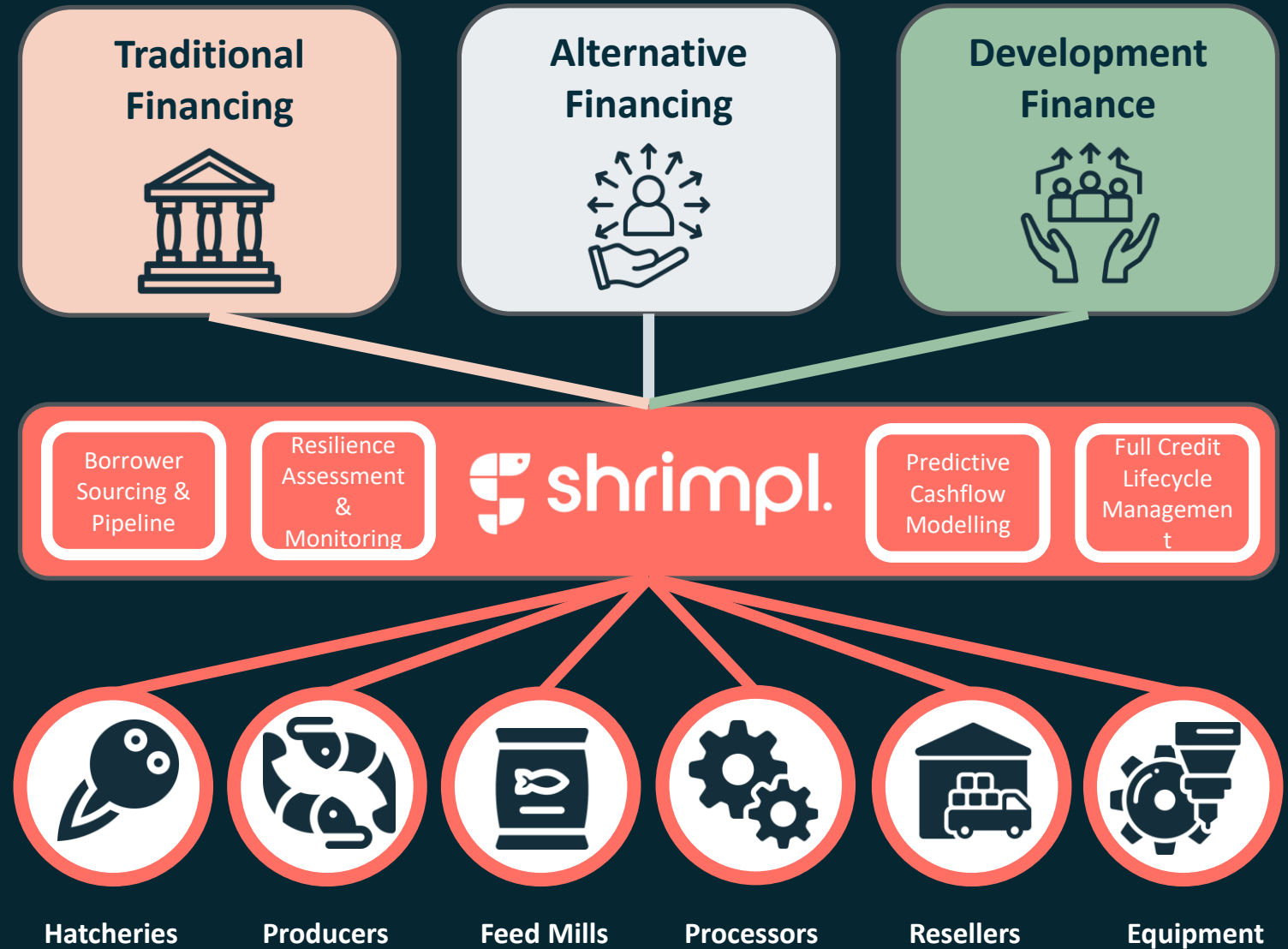
FINANCIAL SERVICES

- Enhanced Risk Assessment
- Customised Financial Products
- Market Analytics & Insights
- Sustainability-Linked Financing
- Streamlined Customer Engagement
- Data-Driven Product Innovation

**The financial sector is, above all else,
about gathering and processing
information, on the basis of which
capital resources can be
efficiently allocated.**

Financing Partners

- Understand the requirements of the Financier or Insurance Partner.
- Companies like Shrimpl connect the industry with a broad universe of lenders.
- All financial service providers will require risk assessments, cashflow modelling, real-time risk monitoring and security for the full credit lifecycle.



Thank You

