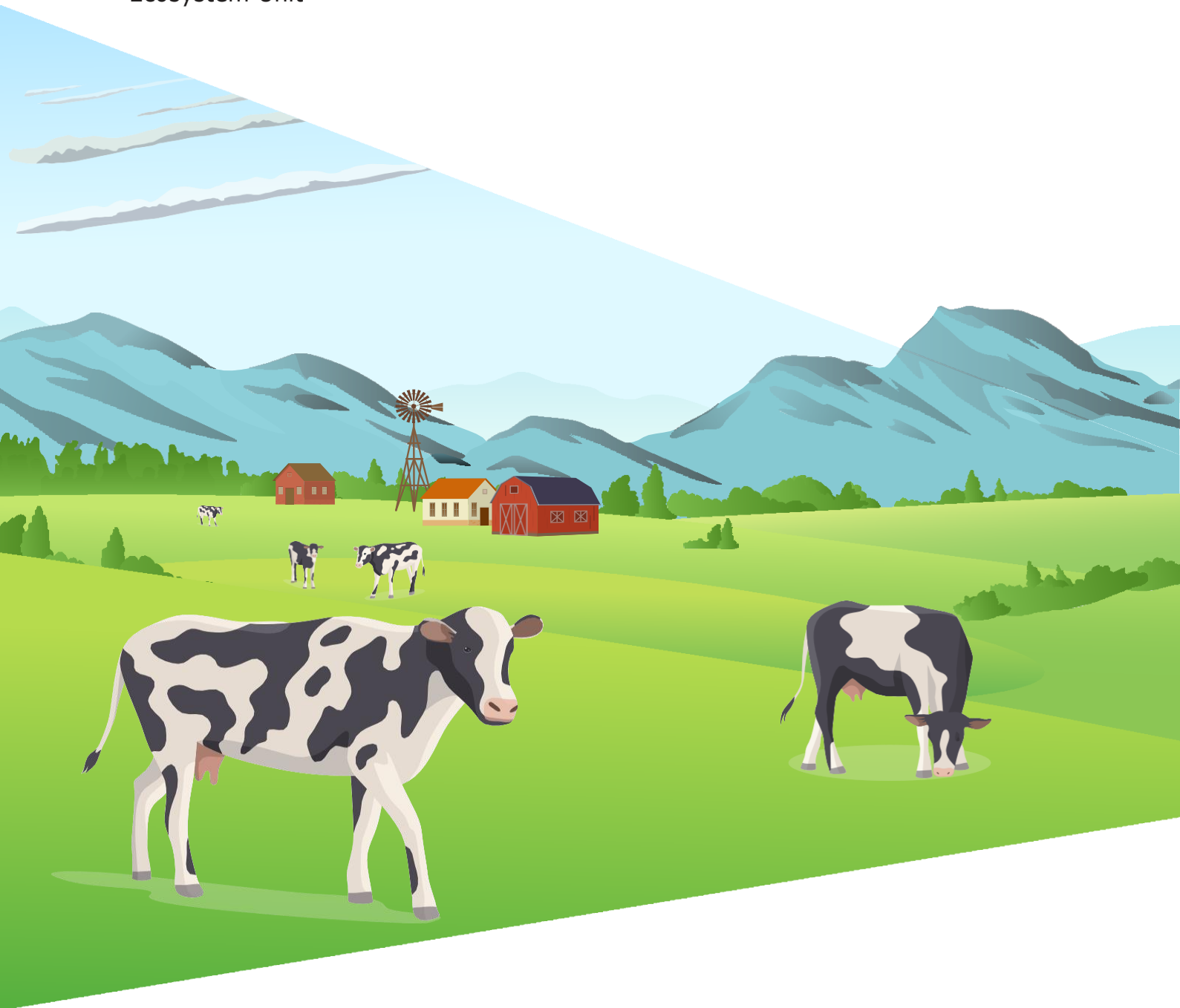


HCL

Grass To Glass (G2G)

Digital ecosystem platform for dairy & livestock industry

Joint solution by HCL Technologies' ERS Digital Transformation Unit and SAP Ecosystem Unit



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Milk being the 2nd largest agricultural commodity traded in the world, thus making the Dairy and Livestock industry the largest among various agricultural produce. However, the Dairy and livestock industry is facing multitude of challenges like

- Animal wellbeing
- Food contamination and safety, tracking and tracing
- Significantly higher GHG (methane) generated by livestock
- Improving milk productivity and quality with thin margins
- Sustainable dairy and livestock farming

There is a need for collaboration, data creation and exchange and sharing insights across ecosystem to address these challenges.

HCL's Digital Transformation Unit (DTU) industry cloud solution, **Grass to Glass (G2G)** is a flagship solution that is designed to transform dairy and livestock industry to address these challenges.



What does it do?

Meeting an ever increasing demand for dairy requires real time visibility across value chain for improving milk yield and health management of cows.

The HCL G2G platform, based on state-of-the-art frameworks such cloud connectivity, AI/ML, IoTization that assists industry to



Increase milk production and quality with real- time health and feed monitoring



Provide individual cow and herd level insights for precision healthcare and precision nutrition



Manage reproduction and calving



Detect cattle diseases like mastitis early in the life cycle and reduce medical treatment cost



Optimize the strategies, tactics, and operations of the dairy farms



Track and trace the milk and dairy products through-out transport and avoid spillage, spoilage or contamination



Improve sustainability by managing and monetizing solid waste and drained water through recycling

Solution salient features

G2G is natively developed over SAP BTP Kyma runtime that uses SAP Fiori frontend. It leverages SAP IoT to receive data from sensors (via gateways placed in the farms), which helps in,

Feed management



Feed management plays a vital role in the farm economy as it constitutes 60% of the production. The platform helps in monitoring the nutrition requirements of the dairy cows to meet the fat percentage of milk and gestation. Proper feed management can bring down the feed cost per cattle significantly while at the same time ensuring the constituents of milk to match the production requirements of cheese, milk powder, etc.

Reproduction management



Reproductive management is achieved by identifying and managing animals to carry out reproductive programs, keeping records like percent calf crop, pregnancy rate, length of calving season, calf morbidity and mortality. With this solution, reproduction or pregnancy rate can be improved up to 34%.

Solid Waste Management



Our solution helps to manage solid waste of cattle and drained water by recycling them to produce bio-energy which helps farms to increase their revenue or reuse it for other applications. The recycled water is utilized to produce the legumes or grass for cattle feed.

Cattle health management



Our solution helps to monitor health of each and every cattle in the herd and at herd level or group level. It detects various diseases like mastitis, ketosis, etc. much in the early life cycle so that it can reduce the antibiotics usage and overall treatment time, thus improving cattle health, reducing health management cost.

Logistics Management



Our solution monitors in the entire cold chain, the temperature of milk and dairy products, and alerts the owners of any problems associated with cooling. It also monitors any spoilage or spillage in the transit. Additionally our solution automatically redirects the fleet to appropriate loading and unloading station in case of any major problems like vehicle breakdown, traffic, etc. In a nutshell, we help reduce the carbon foot print by optimizing logistics.

Implementation

Cloud Product-Minimal configuration needed

Services

Minimal customization,
Extensions/Customer Adaptations

Consulting Services, Sensors and
hardware kit

Pricing

Will be based on the following
considerations:

Price for Customer Cloud
Solution (Usage based/
consumption based pricing)

Additional Services Based Price
-Subject to agreed scope with
the customer

Why HCL?



**Strong Heritage
in Smart Product
Engineering**



**Uncovering Business
Value and New
Revenue Stream**



**Industry Leading
Client Success and
Analyst Ratings**



**Consistent deliverance
of industry specific
client requirements**

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