

Bridge & Sonar for Pulp

by Stora Enso Intelligent Packaging



To realize the full value of the hidden data, Stora Enso offers a full range of hardware and software solutions specifically designed for the pulp industry.

Creating a Digital Twin in pulping

Our Intelligent Pulp solution digitizes the pulping process. Once the ECO Bale tag is encoded and applied to the bale unit, the digital twin is created and the unit can be traced and analysed throughout the value chain.

At every reading point, our solution can associate new updated physical data, such as location information, with the digital twin, and leverage this data to optimise processes. This is what makes all the value creation possible, whether it is about improving warehouse management or optimizing the production based on quality data.

The digital twin is made possible with our Sonar Readpoints and Bridge Middleware & Cloud.

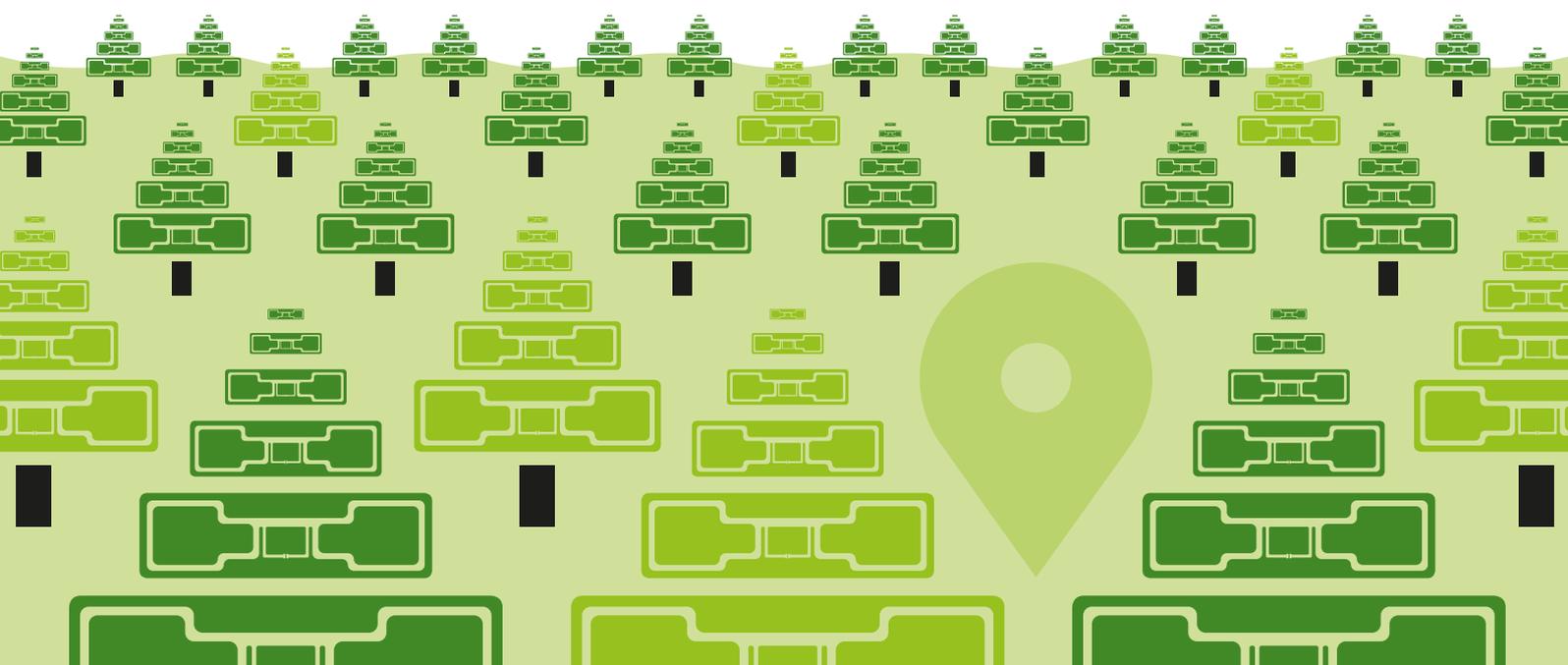
Sonar Readpoints for Pulp

Sonar by Stora Enso includes versatile reading points e.g. gate, tunnel, clamp truck and hand held read points, which

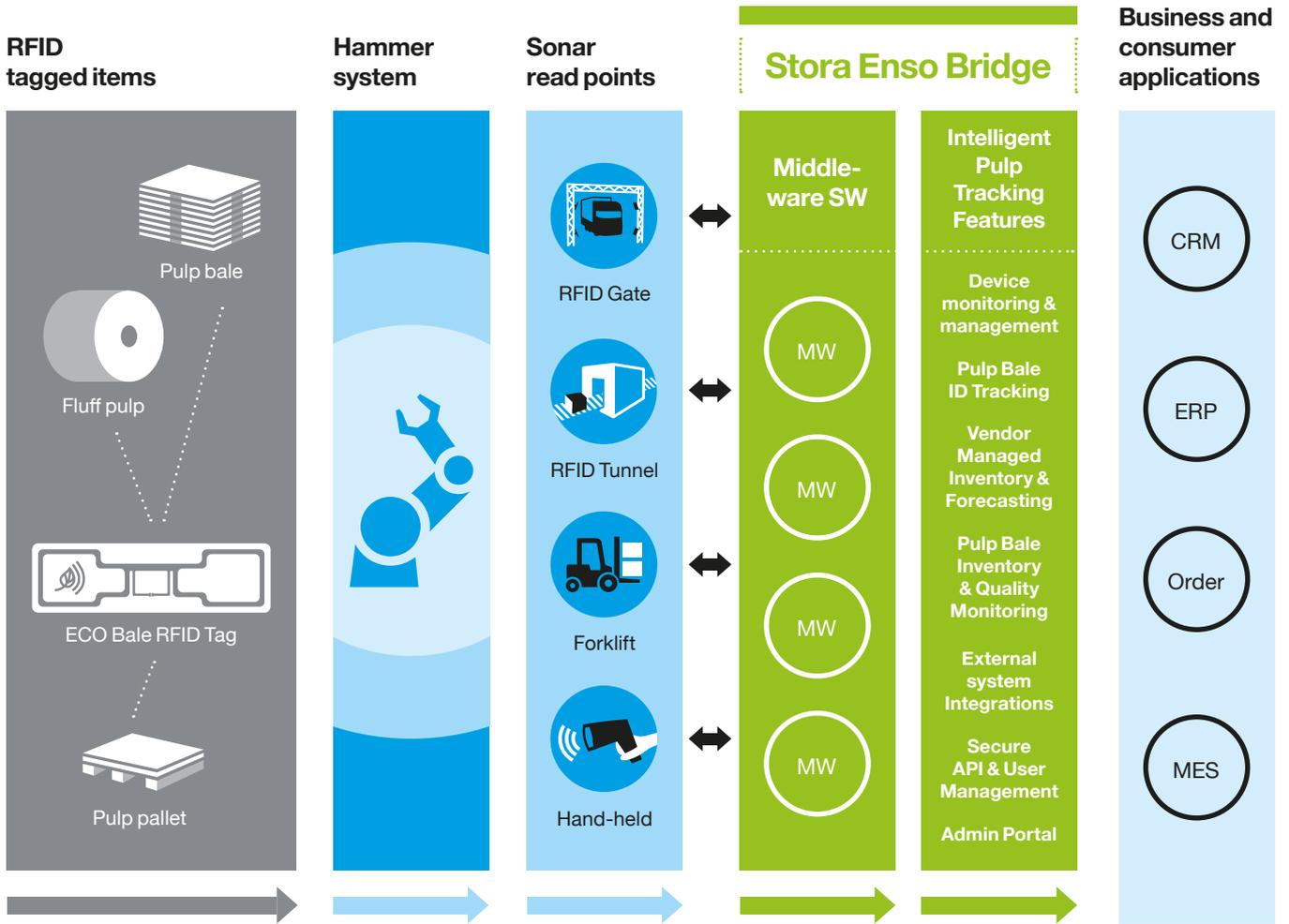
are optimized for customer specific needs. The Sonar system always comes with a full installation kit, including housing for harsh environments, connectivity modules, RF-cables, RFID readers, RFID antennas with customized mounting brackets and industrial PCs. On top of this, Stora Enso takes care of the Sonar installations and maintenance services in the Intelligent Pulp Solution.

Bridge Middleware & Cloud for Pulp

Bridge by Stora Enso consists of software components in the Intelligent Pulp solution. It starts with the Bridge Middleware running on Sonar Readpoints for controlling and fetching RFID data and integrating to local or cloud systems. Bridge Edge Server works as a secure gateway between the Bridge Middleware and Cloud systems and complies to local mill IT requirements. Bridge Cloud, built on Microsoft Azure, provides secure data storage, orchestration and access at global scale, as well as versatile APIs and applications to supply chain management. All these components are seamlessly integrated and may be locally or remotely monitored with secure access.



Solution Overview



Intelligent Pulp use cases throughout the value chain

Use cases vs. Sonar Readpoints	Gate RP	Tunnel RP	Forklift RP	Handheld RP
Automated Pulp Life Cycle Tracking in a Mill (Loading/Unloading, Staging, Warehouse Entry, Pulper Consumption)	✓	✓	✓	
Manual Pulp Life Cycle Tracking in a Mill (Loading/Unloading, Staging, Warehouse Entry, Pulper Consumption)			✓	✓
Automated Warehouse Inventory Bookkeeping	✓	✓		
Automated Sensing of Direction of Movement (e.g. In or Out)	✓	✓		
Manually Operated Warehouse Inventory Bookkeeping				✓
Unit Searching or Validation				✓
Manual Pulp Loading/Unloading on Trucks			✓	✓
Automated Pulp Loading/Unloading on Trucks	✓	✓	✓	
Automated/Manual Workorder Management			✓	

Contact us for more information:
www.storaenso.com/intelligentpackaging