Shima KnitPLM® The First PLM Solutions in Flat Knitting
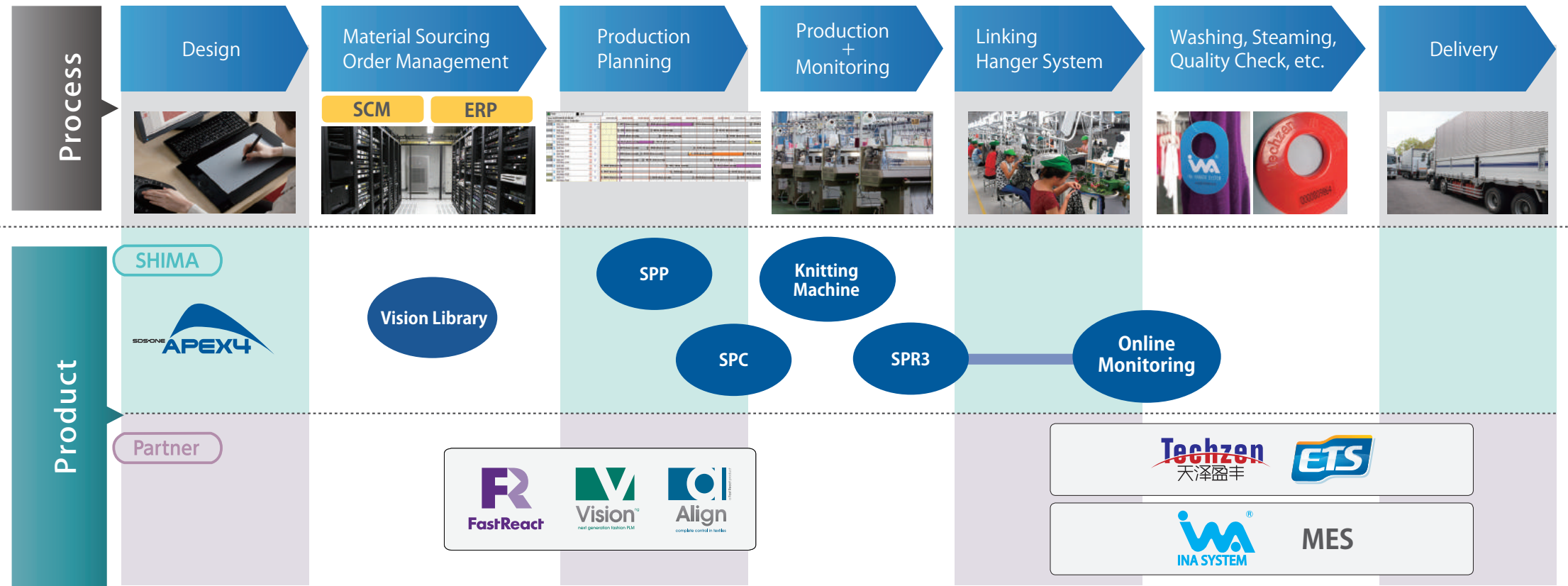

The fashion industry is undergoing rapid change in globalization and diversification, requiring even more variety, higher speeds and shorter cycles. In such an environment, in order to perceive consumer needs and realize sustainable growth, the capability to perform the process from marketing and product planning to production and sales, quickly and without waste, becomes very important. Shima KnitPLM® applies the latest IoT technology to join together SHIMA SEIKI products with our customers' ERP and SCM core systems, offering high levels of traceability and higher productivity throughout all stages in the value chain. With seamless linking of data between systems, workflow can be automated and labor can be reduced while reducing workload associated with data input required for each work stage.

your choice
SHIMA SEIKI

Process

Design	Material Sourcing Order Management	Production Planning	Production + Monitoring	Linking Hanger System	Washing, Steaming, Quality Check, etc.	Delivery
	SCM ERP					

Product

SHIMA

SDS-ONE APEX4

Vision Library

SPP

Knitting Machine

SPC

SPR3

Online Monitoring

Partner

FastReact

Vision — next generation fashion PLM

Align — complete control in textiles

Techzen 天泽盈丰   ETS

iwa INA SYSTEM   MES

Covering All Stages

All stages from product planning on SDS®-ONE APEX series, to product database management, production planning to knitting, linking, finishing, inspection, packaging and delivery, can be covered with Shima KnitPLM®. System design customized to each individual customer can be arranged upon consultation with expert staff from SHIMA SEIKI.

Seamless Datalink

Datalink among SHIMA SEIKI products and partner company products eliminate the need for redundant input over multiple stages. Futhermore, order information managed by an ERP system can be managed for knit production and post-knit processes together from one source.

Global Manufacturing and Industry 4.0 Support Through IoT

All knitting machines are connected online using IoT technology, allowing realtime remote monitoring of a multiple number of production facilities worldwide. Feeding back this information, production planning can be performed for each job according to the optimum production location and timing.

Realtime Order Management

All stages are monitored for each order, with current production conditions constantly being managed, minimizing shipping delays by proactively dealing with any possible problems before they arise. Projected workloads can be confirmed visually as well, for optimization of orders and Work In Progress.

Online Monitoring Using Cloud Service (Dashboard)

Operating rate of the factory, knitting conditions by order, and progress of certain post processes can be checked anywhere using a smart phone or tablet. With large-scale companies performing global production, operating conditions at multiple factories can be monitored or progress for individual orders can be checked by sales staff as well.
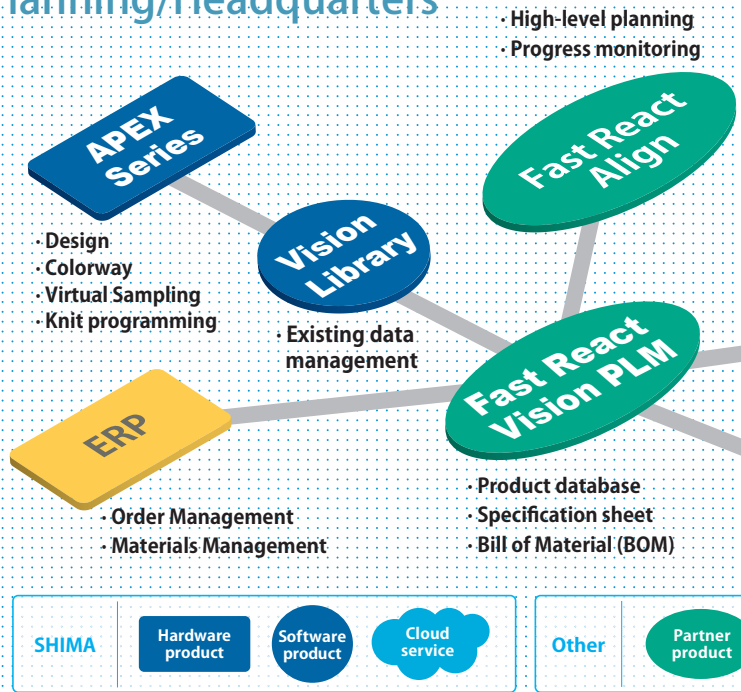
Process Improvement

All stages are managed using quantitative data, which can be used for managing KPI (Key Performance Indicator) and Critical Path Analysis. By analyzing data from the system, various factors that effect production efficiency such as production logistics, operator, material, program, machine adjustment and power conditions can be considered for constant process improvement.
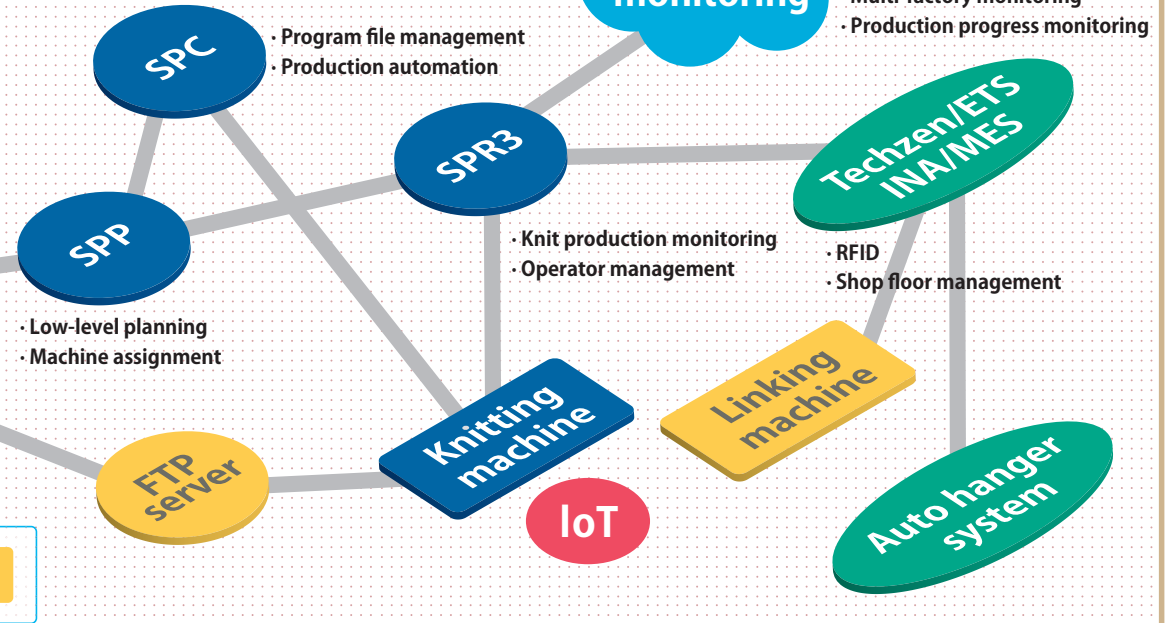
Solutions for Industry 4.0

Data Integration

Planning/Headquarters

- High-level planning
- Progress monitoring

APEX Series
- Design
- Colorway
- Virtual Sampling
- Knit programming

Fast React Align

Vision Library
- Existing data management

Fast React Vision PLM
- Product database
- Specification sheet
- Bill of Material (BOM)

ERP
- Order Management
- Materials Management

Production/Factory

Online monitoring
- Multi-factory monitoring
- Production progress monitoring

SPC
- Program file management
- Production automation

SPR3
- Knit production monitoring
- Operator management

Techzen/ETS INA/MES
- RFID
- Shop floor management

SPP
- Low-level planning
- Machine assignment

FTP server

Knitting machine

IoT

Linking machine

Auto hanger system

SHIMA
- Hardware product
- Software product
- Cloud service

Other
- Partner product
- Third party product

Shima Production Planning (SPP)

Order information taken from partner systems and ERP can be used to plan knit production visually and instinctively. Production plans are then sent automatically to SPR3 or SPC, while knitting machines are prepped for production by obtaining the required data for production from the server automatically. In addition, High-Level Planning data prepared on Fast React system can be used to assign individual machines at the factory side.

Shima Production Control (SPC)

Production schedule data prepared with SPP can be used to automatically set the required data for the required machine, reducing time and labor required in setup.

Shima Production Report 3 (SPR3)

While SPR2 was a stand-alone system, the new and improved SPR3 features standard datalink with PDM, Techzen/ETS and Twin Star/MES. As a result, production management for stages beyond linking that were not possible before, can now be performed effectively, alleviating bottlenecks at each stage and allowing reductions in WIP. SPR3 comes standard with 1 user license for online monitoring, allowing instant monitoring upon purchase of SPR3.

Wireless LAN Connection

Wireless LAN connection between SPR3 server and knitting machine is possible. Wireless LAN support is provided by partner companies.
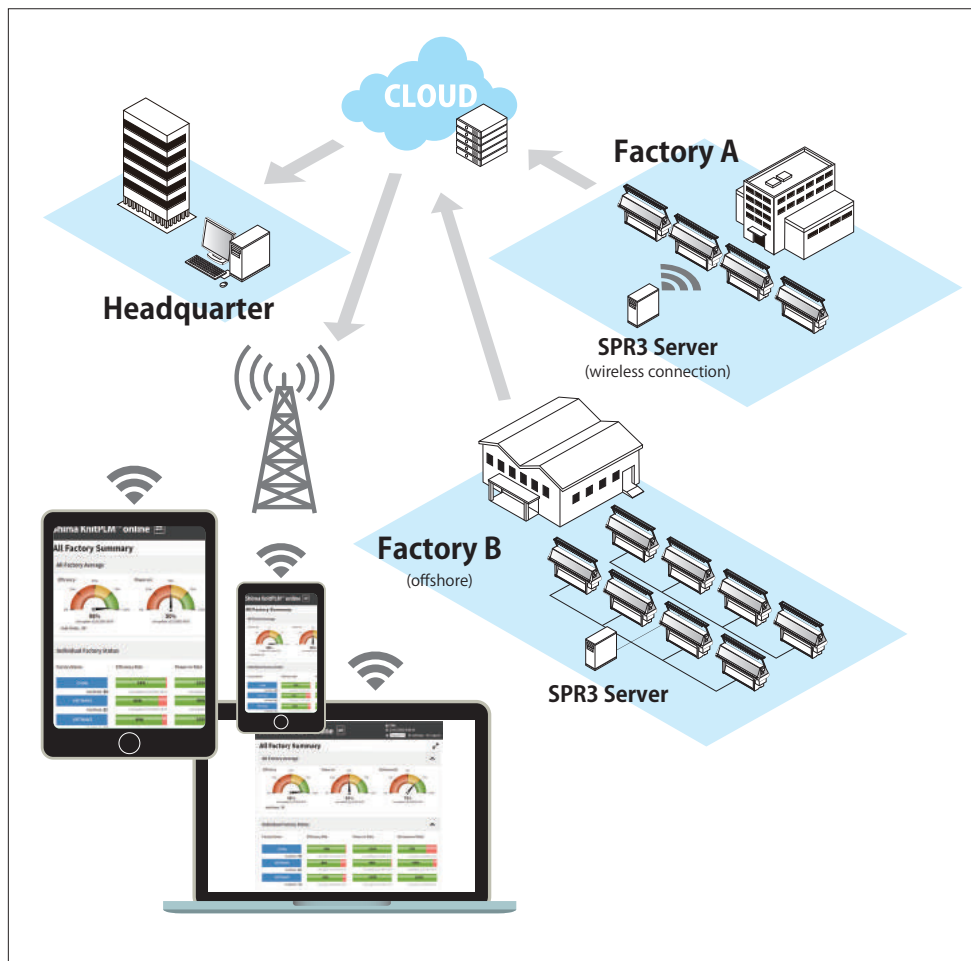
Dashboard Service

Dashboard service allows progress reports to be displayed as graphs according to the customer's needs, making it possible to visually confirm and analyze factory conditions. In addition the alert function allows timely recognition of any irregularities in production.

SPR3 Application (Online Monitoring)

CLOUD

Factory A

Headquarter

SPR3 Server
(wireless connection)

Factory B
(offshore)

SPR3 Server

Solutions Alliance

Collaboration with the following suppliers allows Shima KnitPLM® to offer the best possible solution for each customer.

Fast React Systems Limited
http://www.fastreact.com/

Headquartered in the UK, Fast React Systems is a software solutions provider specific to the fashion industry. With a global sales, training and support network including Europe and Russia as well as South and Southeast Asia, FRS solutions are used by leading apparel and textile manufacturers worldwide.

Fast React Vision PLM

Manage all the technical development stages for new products (including costing, tech packs etc.), manage task diaries (critical path activities) and store all version controlled documents.

Huizhou Techzen Science & Technology Co., Ltd.
http://www.techzen.net.cn/en/index.asp

Headquartered in Huizhou, Guangdong, China, Huizhou Techzen's sales and service network covers South and Southeast Asia. Its strength is in production management software using RFID technology, with installations in many large-scale apparel manufacturers.

ETS

ETS is a production management and monitoring system developed by Techzen using RFID for seamless management from quality control, finishing, packaging and delivery, including auto hanger system in the sewing stage. Effective process management can be realized by direct datalink with ERP, Fast React/Align and Shima KnitPLM®.

Twin Star Singapore Machinery Pte., Ltd.
http://www.ina-ina.com/en/

Twin Star's global headquarters is in Singapore, with manufacturing of its hanger system in Taizhou, Zhejiang, China. Software development is performed in China, as well as Canada and Taiwan, while its sales and service network covers South and Southeast Asia.

INA Automated Garment Production Systems

INA MES features data interface with INA Hanger System and SPR3 for monitoring real-time status of flat knitting, linking, washing, finishing and delivery. Bottlenecks are relieved in all processes and throughput is maximized, realizing overall reduction in production cost.

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your choice
SHIMA SEIKI

In order to provide optimum network solutions, SHIMA SEIKI welcomes the opportunity to expand its alliance and work together with new partners. Contact SHIMA SEIKI for more details.

Shima KnitPLM

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Global network

⚠ **SAFETY NOTICE** In order to ensure safe operation of the equipment, please review all operation manuals carefully before use.