



Process optimisation based on quality data for the tissue industry

## Today's presenter and topics





### **Andrea Friedrich**

- serving the surface inspection industry for over 30 years
- different account and sales management roles
- background in engineering
- makes sure that ISRA customers meet or exceed their expectations since 21 years

### **Today's topics**

- Web Inspection Systems WIS
- Web Break Monitoring WBM
- WIS WBM Coupling
- Tissue Converting Control System
- Paper Quality Management System PaperQMS

## More than 30 years experience and still setting new standards...



# **Application Specific Standard Products**

High-end products for complex applications in niche markets



Key Account Management

Solar

**Semiconductors** 

Leading-edge technology

Global players

Significant market share

In-depth process expertise

Outstanding ROI Machine Vision

Algorithms & Software

Optics & Illumination

Industry 4.0

SRA VISION

**Production Analytics** 

Embedded Hardware

Modular Hardware Platform

Service-oriented Software

Leading-edge technology

Focus on 3D Machine Vision

High-volume markets

Multi-channel distribution

Outstanding ROI

Generic
Standard Products

Standardized products for all markets















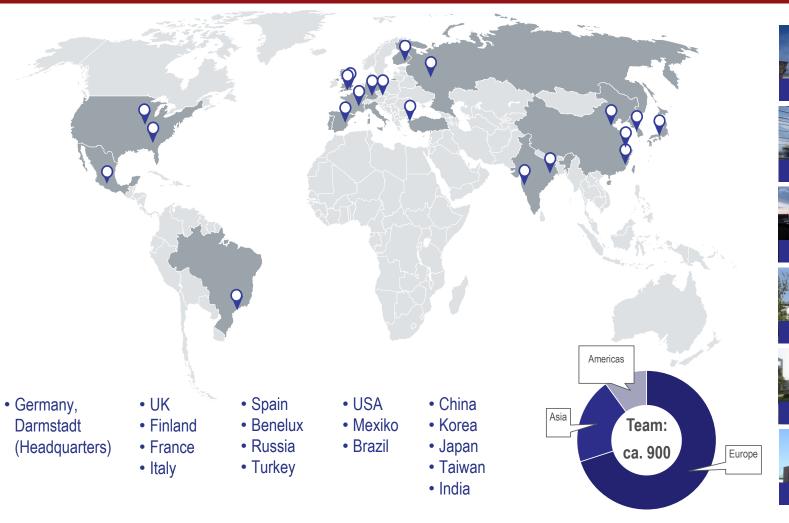




Distributors, Integrators, OEM

## **ISRA** worldwide













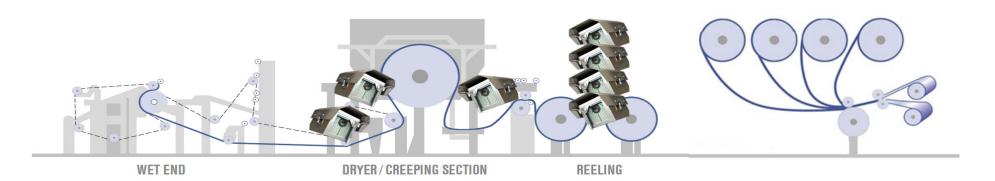




## Goal: avoid costly web breaks at converting line



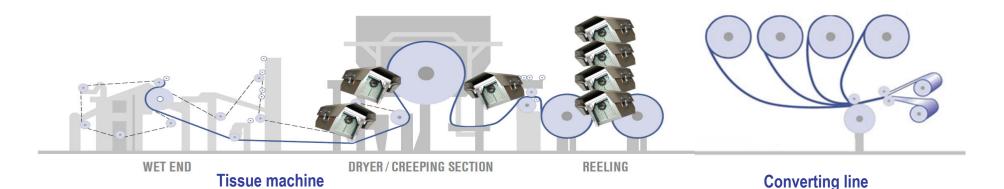
- Significant reduction of web breaks in roll handling
- **→** Massive cost savings through minimal downtime
- **→** A contribution to reduce your carbon footprint



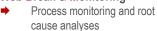
Tissue machine Converting line

## Web Monitoring, Inspection & Process Optimization









- Best image quality in the market
- Lowest operational costs



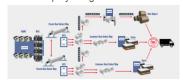
#### Web Inspection System

- Quality and process control
- Fastest cameras in the market
- Most reliable classification
- Color inspection technology



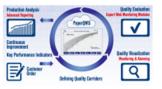
#### Middle cut inspection / Customer Roll Defect Report

- Automatic tracking of cut positions
- Monitoring of cut witdh: alarming (defect) if too to large, to small or not present
- Cut positions announced via telegram, set via parameters or manual input (under dev)
- ODIS displays mother reel with cut positions
- CRDR is used to display daughter reels



#### Paper Quality Management System

- Position correct defect syncronisation throughout the further process
- Exact reel reports





## Web Break Monitoring



- **▶** Providing best Image Quality in the harshest environments
- **→** Save Costs with early recognition of process disturbances

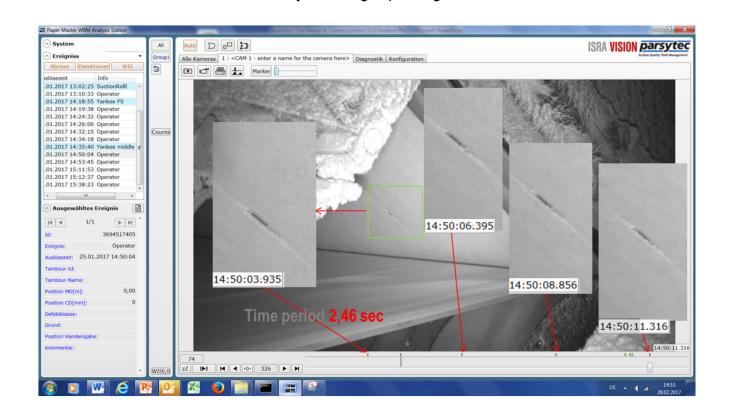


## WBM for Tissue: IntelliCam – Detection of repeating defects



### **Paper Master Web Break Monitoring**

EASY: detection and analysis of repeating defects at operator station More than 50% of holes can be reduced by avoiding repeating defects

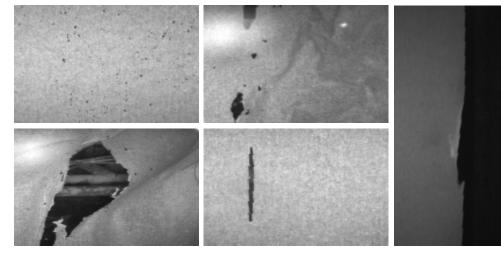


# Web Inspection System









holes

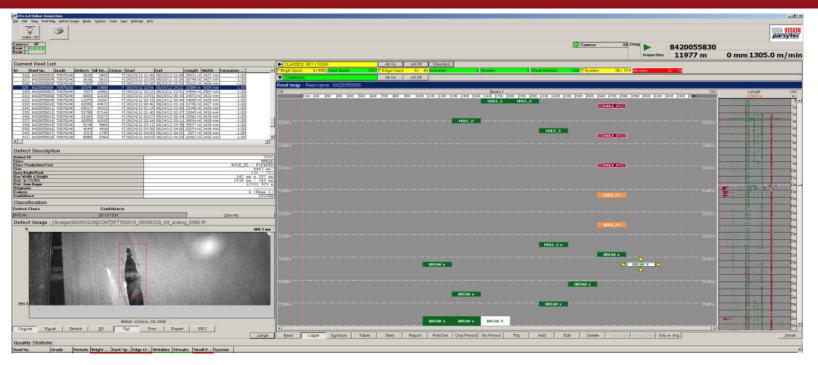


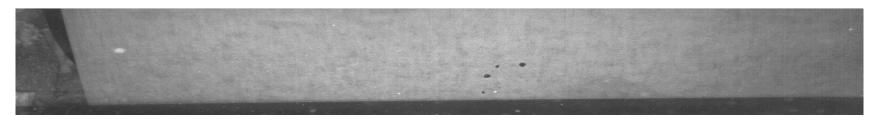




# Web Inspection System

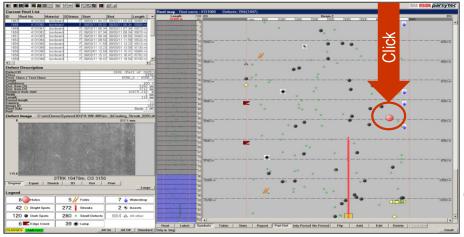




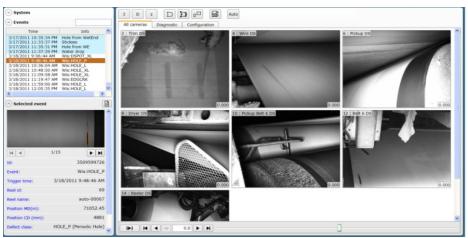


## WIS & WBM - Coupling





Defect at WIS



### **Customer Value**

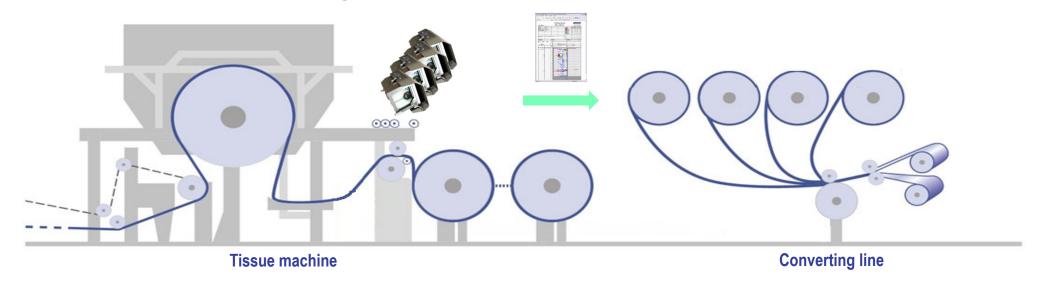
- ➤ Quickly and precise identification of defect and break birth origins
- ➤ Precise tracking of a defect through entire machine, understanding it's source and changes during travel
- ➤ Valuable improvement of worktime by pinpointing the correct areas of the process
- ➤ Great improvement in production efficiency

Defect birth as captured with IntelliCams

## Reduce Costs related to web breaks during Tissue Converting



### No web breaks in Converting related to process critical defects from the Tissue machine

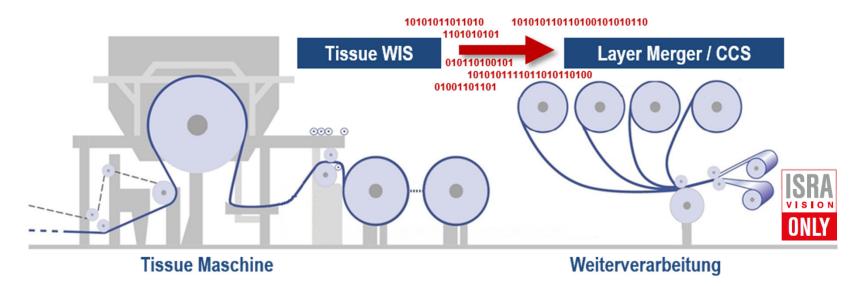


- Reliable detection of process critical defects with the PAPER MASTER 4.0 at the Tissue machine
- Middle-cut inspection with double width Tissue machines
- Accurate defect logs of the rolls completed at the Tissue machine

## Tissue Converting Control System – how it works



## Cost reduction by preventing web breaks in converting

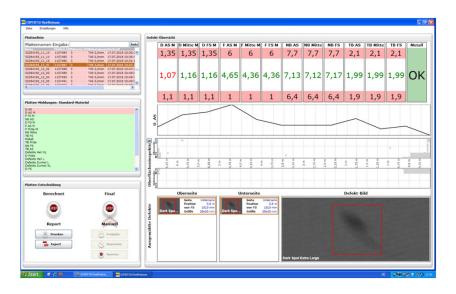


- The Layer Merger merges the roll protocols for each individual layer
- The Converting Control System controls the speed of the converting line
- No web breaks in converting related to process-critical defects coming from the Tissue machine

## Automated quality evaluation of each individual Roll



## Cost optimization through quality assessment of each Roll

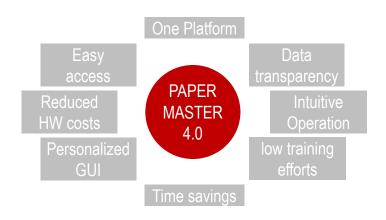


- Automated quality assessment of each Roll
- Integration of data from third-party sources (moisture, weight per unit area, formation, ...)
- Individual parameterizable evaluation rules

## PAPER MASTER 4.0



## First browser based platform for web quality and process analysis





- Global Data Access
- One browser based Platform
- Access with Smartphone, Tablet or conventional PC's





Thank you for your attention