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Americas' SAP Users' Group

Building a Dashboard in SAP Analytics Cloud for Plant Maintenance KPI

Alain St-Onge, Manager IT, BI & Integration
Resolute Forest Products
Session ID # 83131

resolute
Forest Products

About the Speaker

Alain St-Onge

- Manager IT, BI & Integration, Resolute Forest Products
- Over 30 years of experience in IT and more specifically, 20 years at Resolute.

Andre Giroux

- Account Executive, Beyond Technologies
- +20 years in various analytics roles, including data modeling, solution architecture, from ETL to storage to visualization.

Agenda

- Who is Resolute
- Who is Beyond
- Project context
- Visuals and navigation
- Key takeaways/benefits
- Lessons learned

About Resolute Forest Products

Who we are

- Resolute Forest Products is a global leader in the forest products industry with a diverse range of products, including market pulp, tissue, wood products, newsprint and specialty papers, which are marketed in close to 70 countries.

- The company owns or operates some 40 facilities, as well as power generation assets, in the United States and Canada.

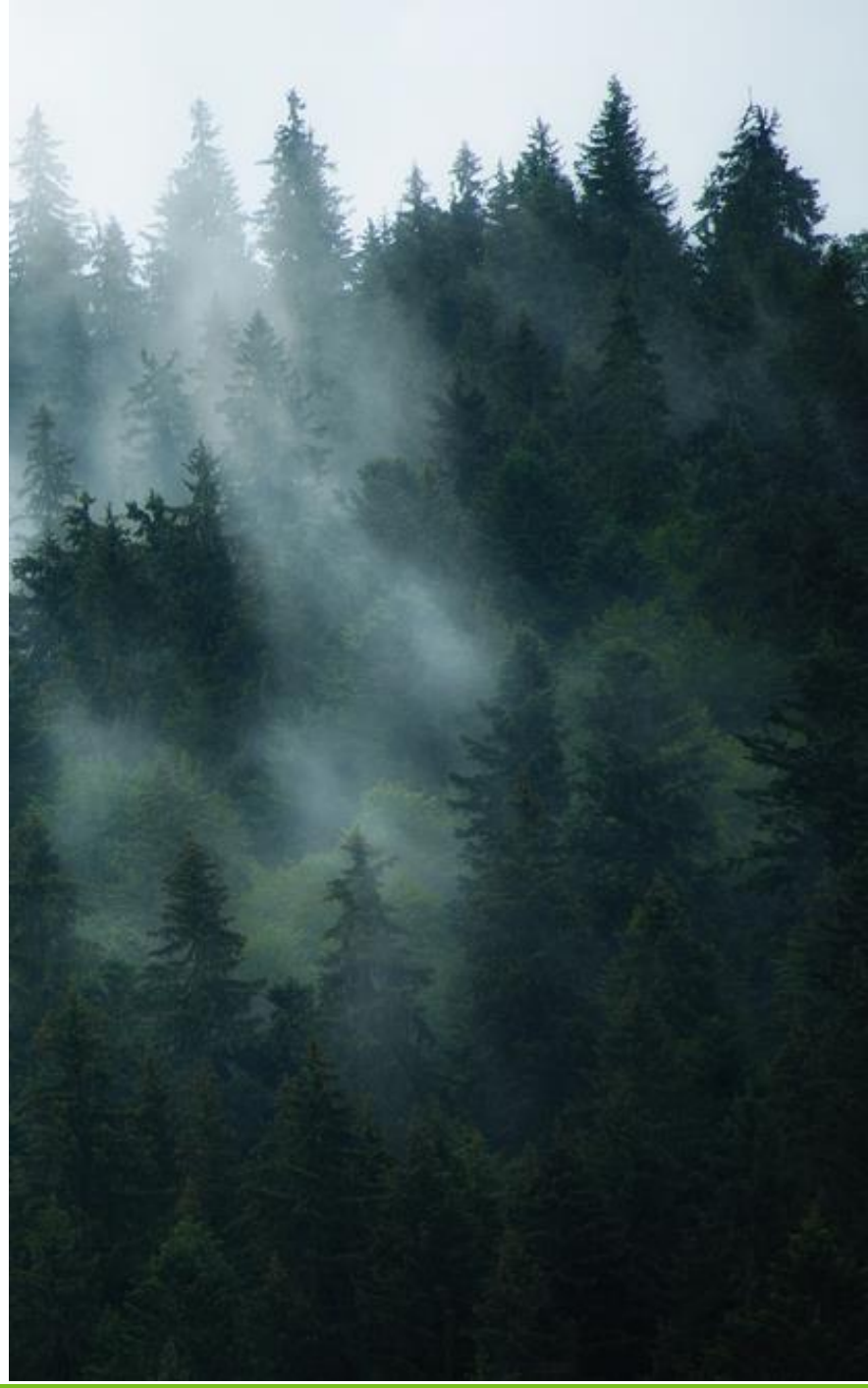
- Resolute has third-party certified 100% of its managed woodlands to internationally recognized sustainable forest management standards.

- Resolute has received regional, North American and global recognition for its leadership in corporate social responsibility and sustainable development, as well as for its business practices.

About Resolute Forest Products

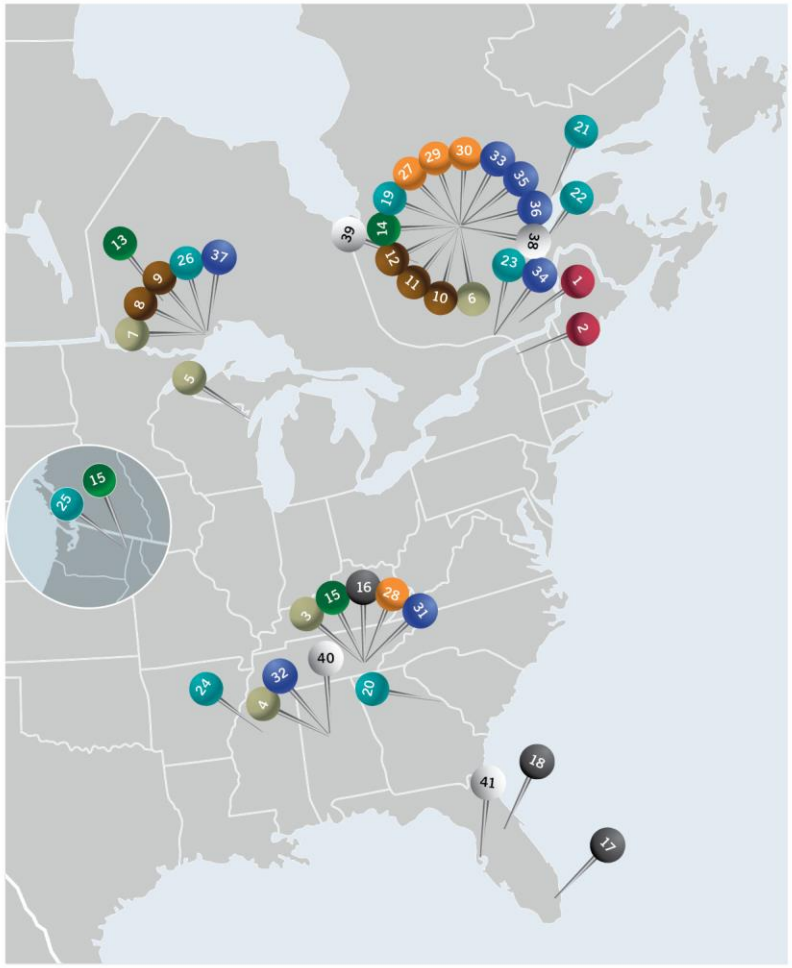
Who we are

- 2018 sales: $3.8 billion
- Products marketed in close to 70 countries
- 100% of managed woodlands certified by independent third parties
- 7,000+ employees



About Resolute Forest Products

Our operations



OFFICES

1 Montreal (Quebec) – Head Office
2 Plattsburgh (New York) – U.S. Office

MARKET PULP

3 Calhoun (Tennessee)
4 Coosa Pines (Alabama)
5 Menominee (Michigan)
6 Saint-Félicien (Quebec)
7 Thunder Bay (Ontario)

WOOD PRODUCTS

8 **SAWMILLS (ONTARIO)**
Atikokan, Ignace, Thunder Bay

9 **WOOD PELLET PLANT (ONTARIO)**
Thunder Bay

10 **SAWMILLS (QUEBEC)**
Comtois (Lebel-sur-Quévillon), Forest Products Mauricie (La Tuque), Girardville, La Doré, Maniwaki, Mistassini, Opitciwan (Obedjiwan), Outardes (Pointe-aux-Outardes), Saint-Félicien, Saint-Thomas, Senneterre

11 **REMANUFACTURED WOOD PRODUCTS FACILITIES (QUEBEC)**
Château-Richer, La Doré

12 **ENGINEERED WOOD PRODUCTS FACILITIES (QUEBEC)**
Resolute-LP – Larouche
Resolute-LP – Saint-Prime

WOODLANDS

13 **ONTARIO**
Northwestern Ontario

14 **QUEBEC**
Abitibi and Nord-du-Québec, Côte-Nord, Lac-Saint-Jean, Mauricie, Outaouais

15 **UNITED STATES**
Southeastern U.S., Northwestern U.S.

TISSUE

16 Calhoun (Tennessee)
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NEWSPRINT

19 Amos (Quebec)
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24 Grenada (Mississippi)
25 Ponderay, Usk (Washington)
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SPECIALTY PAPERS

27 Alma (Quebec)
28 Calhoun (Tennessee)
29 Dolbeau (Quebec)
30 Kénogami, Saguenay (Quebec)

ENERGY

31 Calhoun (Tennessee)
32 Coosa Pines (Alabama)
33 Dolbeau (Quebec)
34 Gatineau (Quebec)
35 Hydro-Saguenay, Saguenay (Québec)
36 Saint-Félicien (Quebec)
37 Thunder Bay (Ontario)

OTHER OPERATIONS

38 Normandin (Quebec) planer mill
39 Senneterre–Lac-Clair (Quebec) planer mill
40 Talladega (Alabama) chip production mill
41 Tampa (Florida) paper recycling center

About Beyond Technologies

Who we are

Founded in 2005

Leader in SAP solution implementations in Canada

SAP Quality Awards

100% SAP

SAP® Certified
Partner Center of Expertise

SAP® Lighthouse Program
S/4 HANA Cloud

250 employees and growing

Average SAP experience
Functional: 12 years
Technical: 8 years
BI: 8 years

Currently 350+ consultants on mandates

Great Place To Work. Certified
NOV 2018 – NOV 2019
CANADA

Global presence

Project context

- Resolute developed an application to capture the various observations for equipment in their plants
- Part of these KPIs were entered manually by each plant's maintenance teams, others were automatically generated
- This data was stored in BW and has a lot of value for the company, as it represents their plants' performance (plant maintenance)
- Up to now, this data was stored in an Excel file that was not shared with everyone (only to plant managers)
- This Excel file required several days to update

Project objectives

- Create a dashboard in SAP Analytics Cloud to enable employees from each Resolute plant (13 plants, approximately 150 users) to view KPIs for the other plants and compare them to set objectives
- Enable employees to track performance month per month in Resolute plants based on various KPIs set by management
- Ensure security and segregation where required (financial KPIs)

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Project deliverables

- Functional SAP Analytics Cloud tenant
- SAP Analytics Cloud connectivity to the Resolute BW environment (import of BW data in the cloud, Live connections in the plans)
- Support to Resolute teams to prepare data on the BW side
- Creation of a model and a story in SAC (dashboard creation)
- Workshop with the client to suggest relevant visuals based on the type of KPI
- Implementation of security in SAP Analytics Cloud (some KPIs are not visible to everyone)
- Test
- Documentation and knowledge transfer

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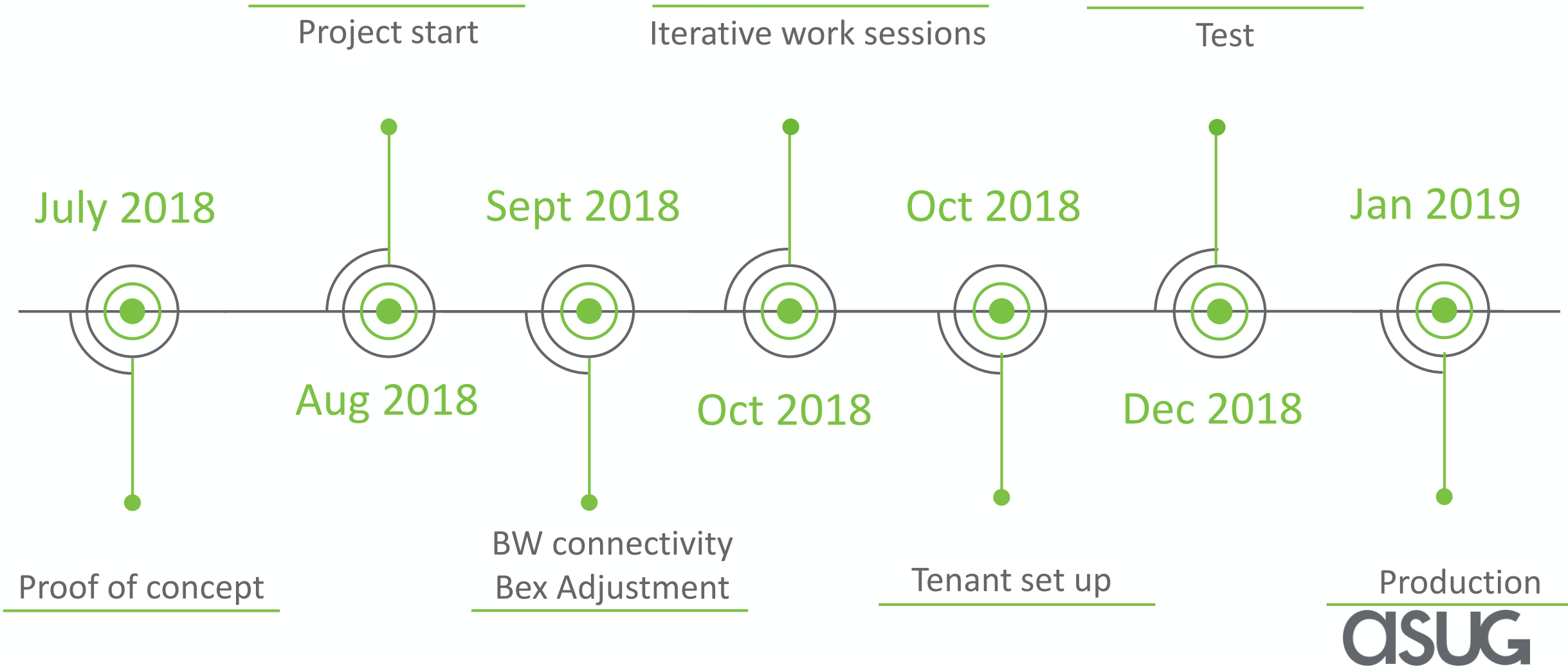
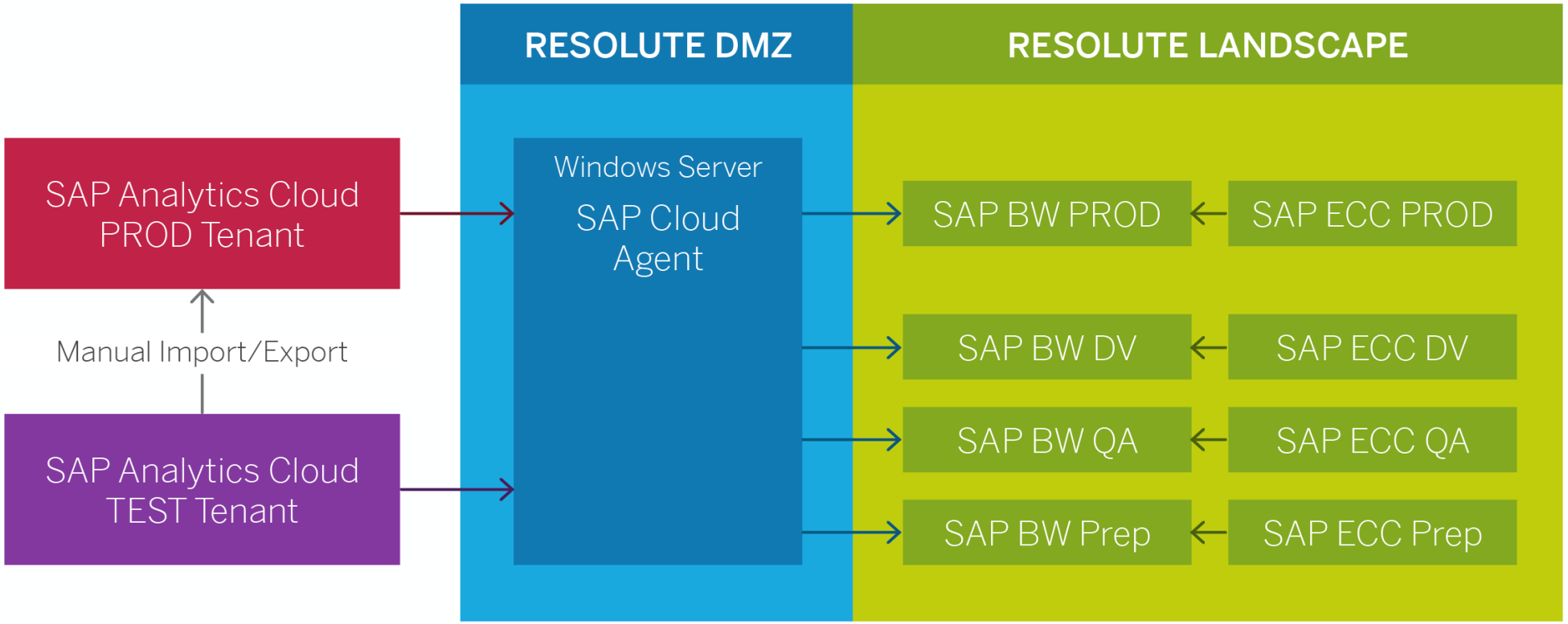
Business justification/impacts

- In order to satisfy the needs of Resolute's Reliability and Maintenance Corporate model, it is necessary to track several KPIs across the mills
- This is part of our company's leadership requirement to benchmark and accurately measure all of our mills' performance
- At present, the data is difficult and cumbersome to retrieve or may not be readily available
- Get our data from the same source
- Standardize the calculation of each KPI
- The need for this project was identified after the roll-out of the SAP PM module in our 13 plants

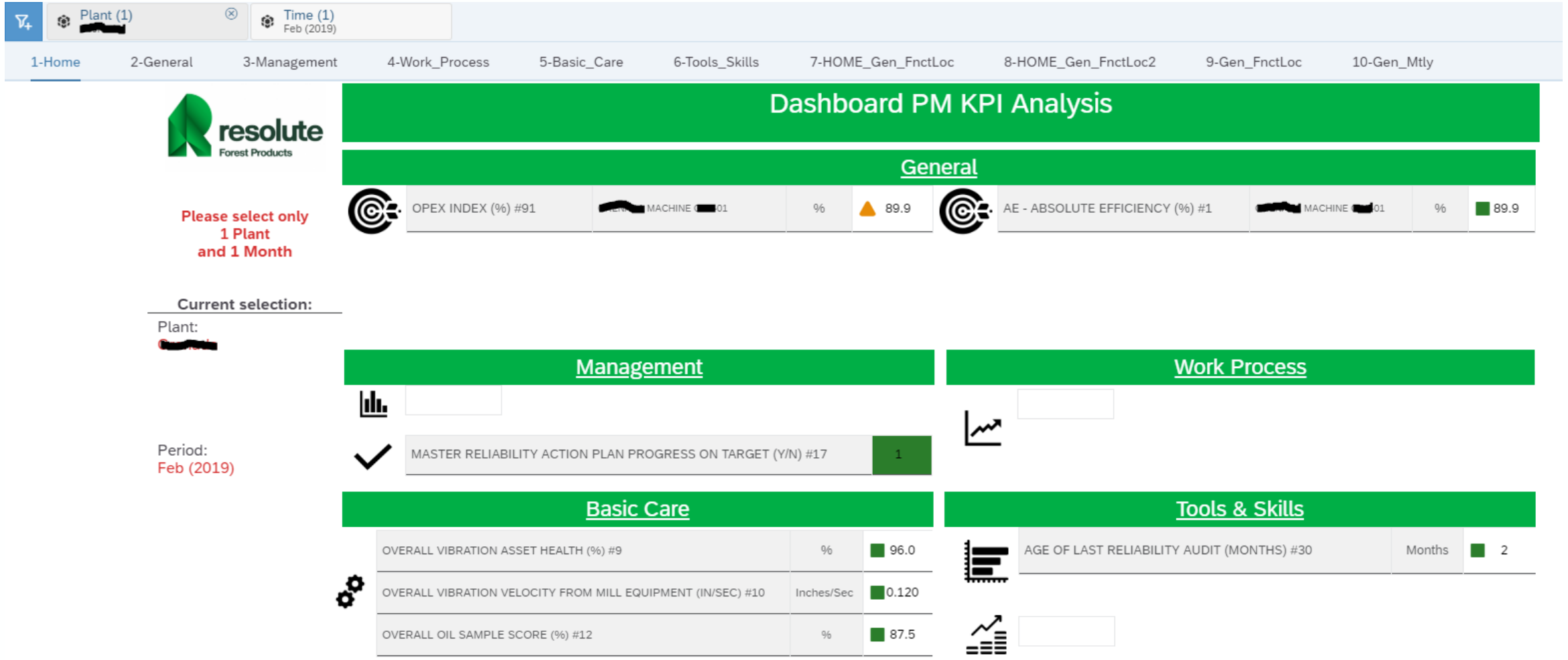
Project Timeline



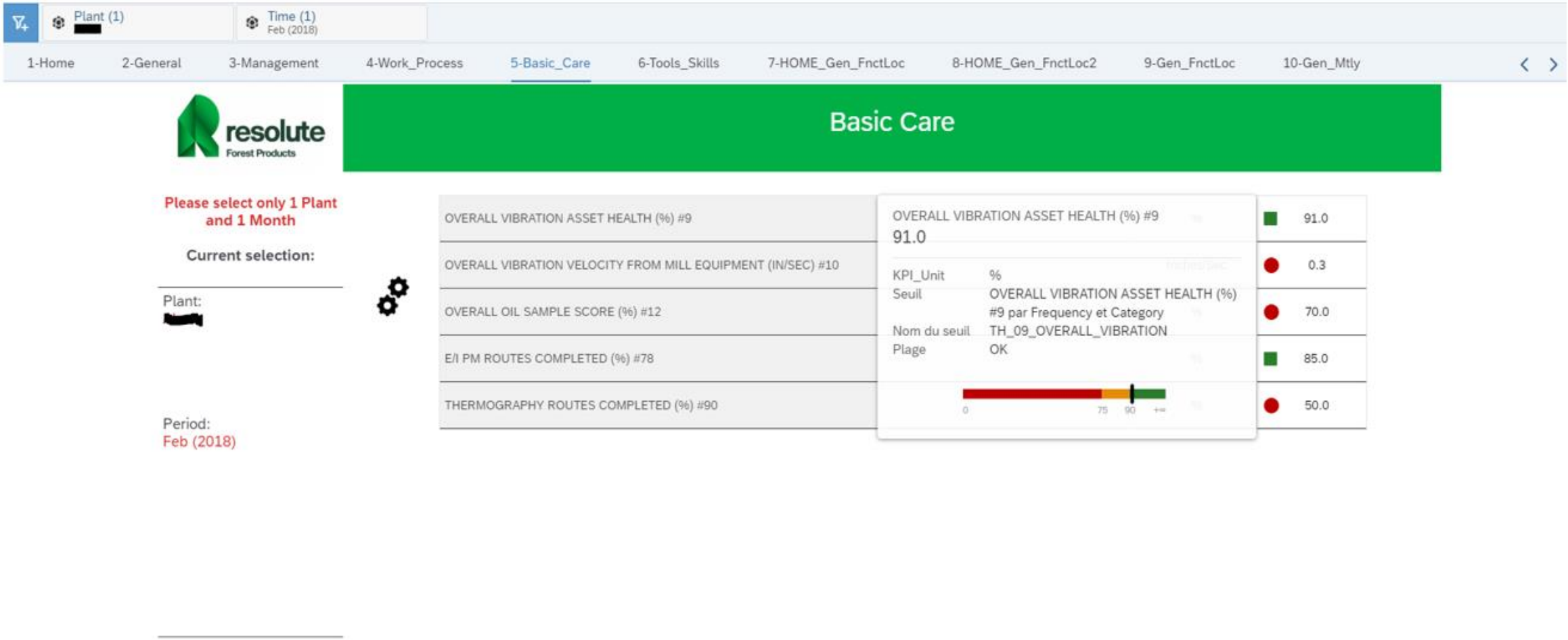
Resolute landscape



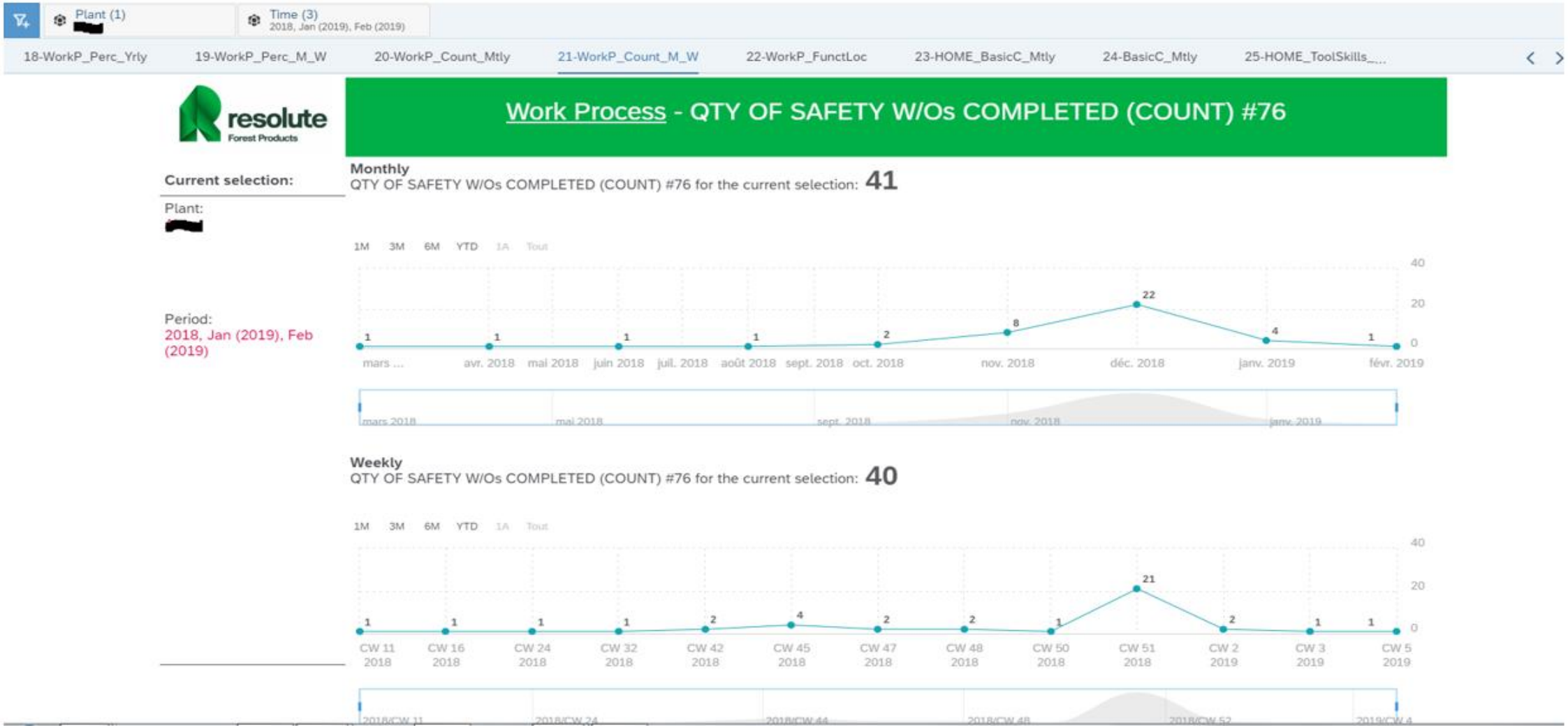
Homepage


Plant (1)
Time (1)
Feb (2019)
1-Home
2-General
3-Management
4-Work_Process
5-Basic_Care
6-Tools_Skills
7-HOME_Gen_FnctLoc
8-HOME_Gen_FnctLoc2
9-Gen_FnctLoc
10-Gen_Mtly
resolute
Forest Products
Dashboard PM KPI Analysis
General
OPEX INDEX (%) #91
MACHINE 01
%
89.9
AE - ABSOLUTE EFFICIENCY (%) #1
MACHINE 01
%
89.9
Please select only
1 Plant
and 1 Month
Current selection:
Plant:
Management
Work Process
Period:
Feb (2019)
MASTER RELIABILITY ACTION PLAN PROGRESS ON TARGET (Y/N) #17
1
Basic Care
OVERALL VIBRATION ASSET HEALTH (%) #9
%
96.0
OVERALL VIBRATION VELOCITY FROM MILL EQUIPMENT (IN/SEC) #10
Inches/Sec
0.120
OVERALL OIL SAMPLE SCORE (%) #12
%
87.5
Tools & Skills
AGE OF LAST RELIABILITY AUDIT (MONTHS) #30
Months
2

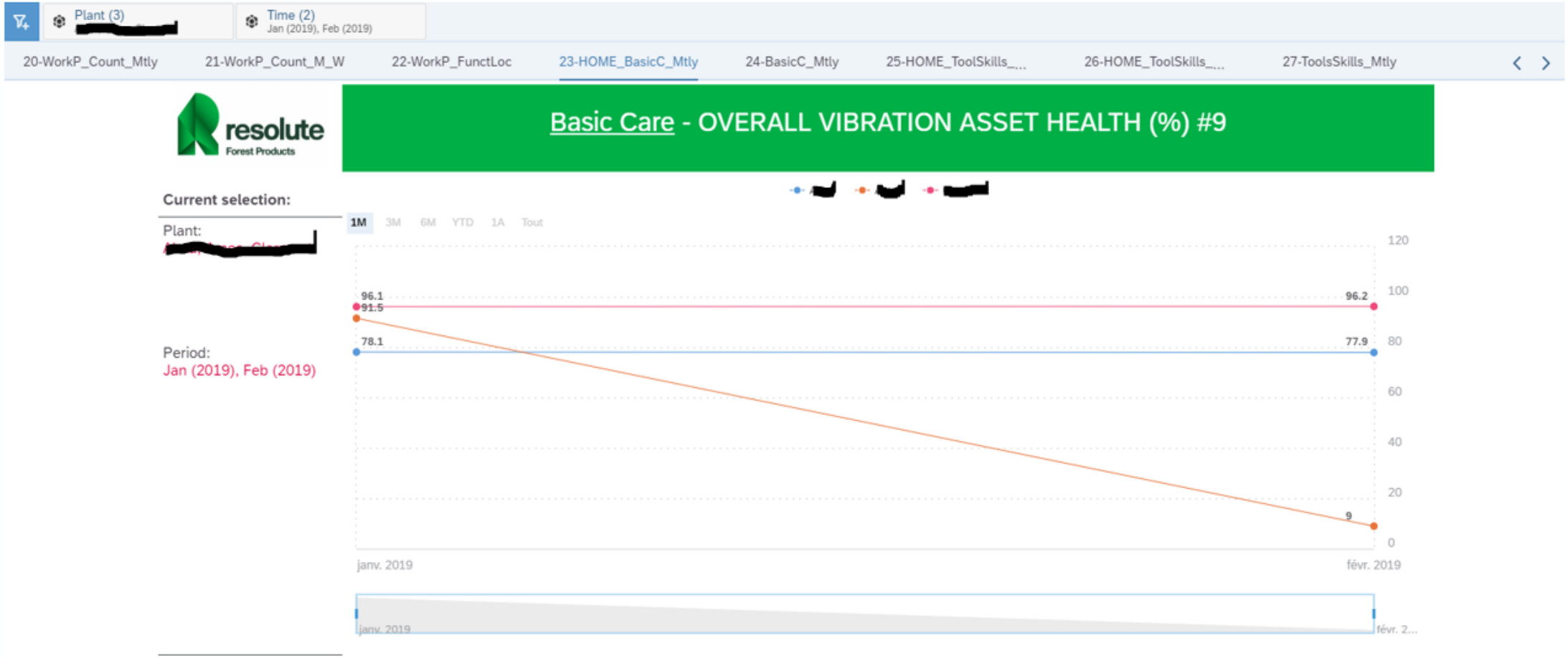
KPI threshold indicator



KPI variation – 1 year for 1 plant



KPI variation – 2 months for 3 plants



Key results for Resolute

- Confirmed BW as analytics system of record
- Efficient data source connectivity
- Easy data wrangling
- Adoption rate across Resolute employees
- Sandbox approach efficiency

Lessons learned and recommendations

- Start small, find a setup you can digest, step into analytics (SAC) progressively
- Make sure source datasets are reliable, and that integration with SAC is considered early
- Manage security early
- Plan multi-language usage perimeter

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Presentation Materials

Access the slides from 2019 ASUG Annual Conference here:

http://info.asug.com/2019-ac-slides

Q&A

For questions after this session, contact us at [alain.st-onge@resolutefp.com].

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