SAP Customer Experience

SAP Customer Experience AI
Strategy & Roadmap

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THE BEST RUN SAP

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Agenda

- AI Approach in SAP Customer Experience

- AI and Machine Learning in SAP Customer Experience Applications

- Future Innovations

- Roadmap

AI Investments dominated by Marketing, Sales & Service

**Top five objectives organizations want to achieve
by investing in AI-driven initiatives**

1 Drive revenue

2 Better serve existing customers

3 Remain competitive

4 Meet rising customer expectations

5 Improve / strengthen brand

Base: 418 business and tech professionals

Source: Forrester's Top Emerging Technologies For Future Of Marketing, 2017; Forrester's Building Trust And Confidence: AI Marketing Readiness In Retail And eCommerce, 2017

AI Approach
SAP Customer Experience

SAP

AI Platforms are for data scientists
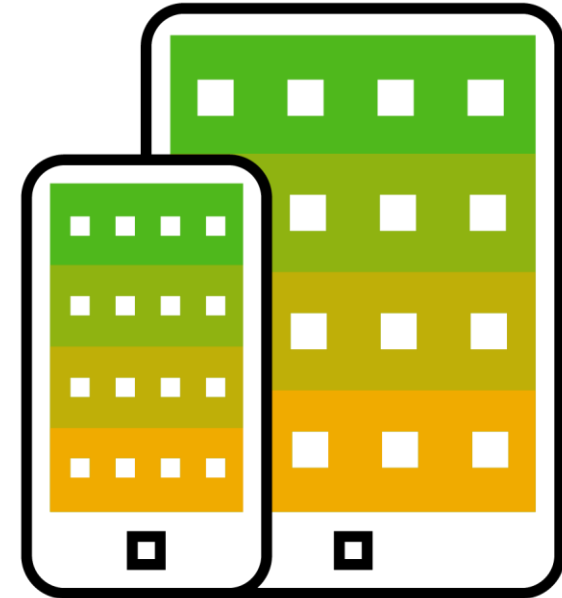
AI Solutions are for business users

Continuous ensemble machine learning delivering fast time to business value
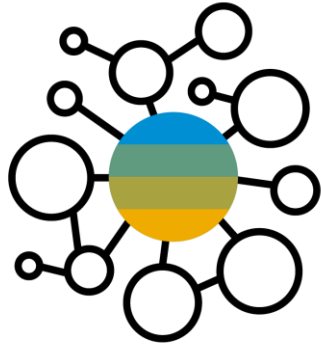
Connected to CX
data sources
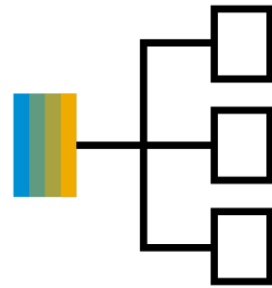
Automatic, Dynamic
Model assessment,
training and scoring
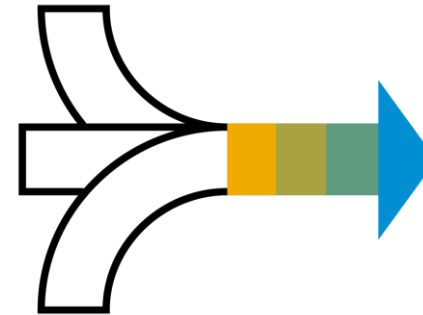
Easily consumed by CX
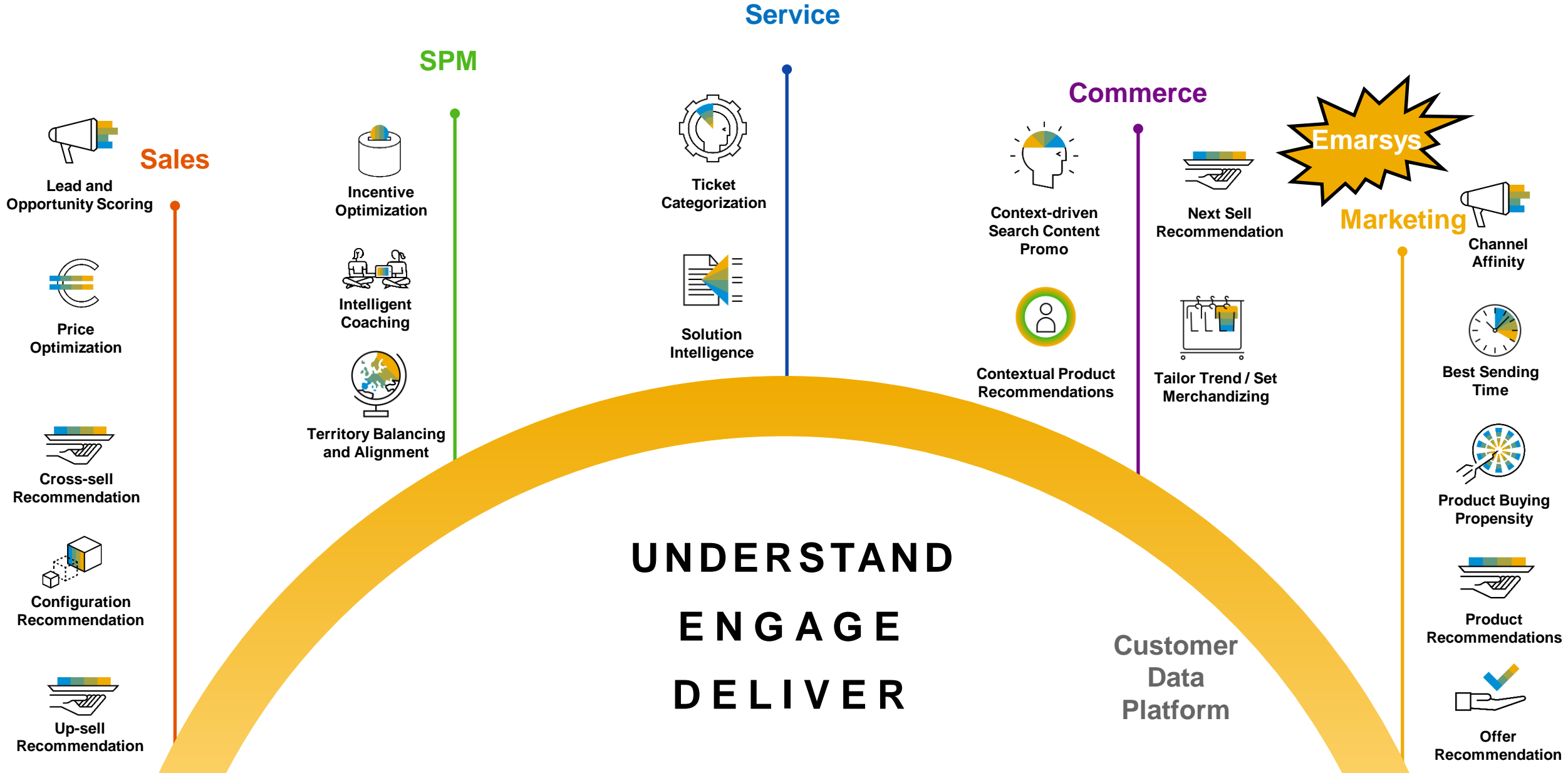applications and No
Code / Low Code
interface

Continuously
measuring and
improving AI outcomes

AI and Machine Learning in SAP Customer Experience

SAP CUSTOMER EXPERIENCE

Service

SPM

Commerce

Sales

Emarsys

Marketing

Lead and
Opportunity Scoring

Incentive
Optimization

Ticket
Categorization

Context-driven
Search Content
Promo

Next Sell
Recommendation

Channel
Affinity

Price
Optimization

Intelligent
Coaching

Solution
Intelligence

Contextual Product
Recommendations

Tailor Trend / Set
Merchandizing

Best Sending
Time

Cross-sell
Recommendation

Territory Balancing
and Alignment

Product Buying
Propensity

Configuration
Recommendation

UNDERSTAND

ENGAGE

DELIVER

Product
Recommendations

Up-sell
Recommendation

**Customer
Data
Platform**

Offer
Recommendation

Effective selling with Product and Pricing Recommendations
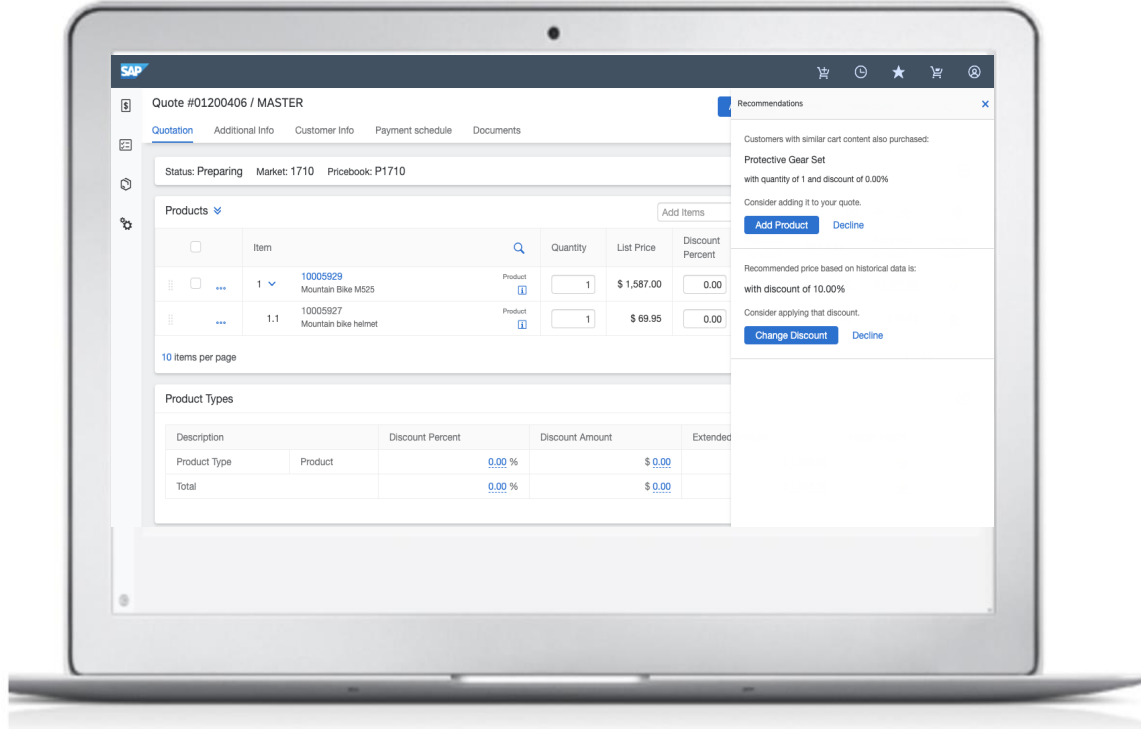
Performance

- Administrators spend less time updating prices and discounts

- Sales spend less time quoting

- Deliver the products and services at a price customers will want

Simplicity

- Onboard sales reps faster

- Increase deal sizes

- Increase win rates

Product Pricing AI benefits without data scientists or IT

Automatically evaluates the products, services and their price in the shopping cart
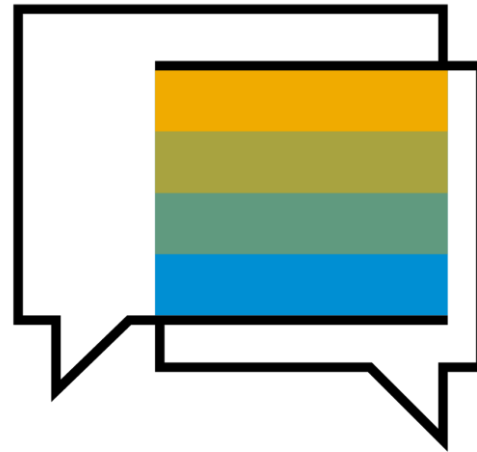
Models use historical customer and sales data, automatically learning daily from won deals
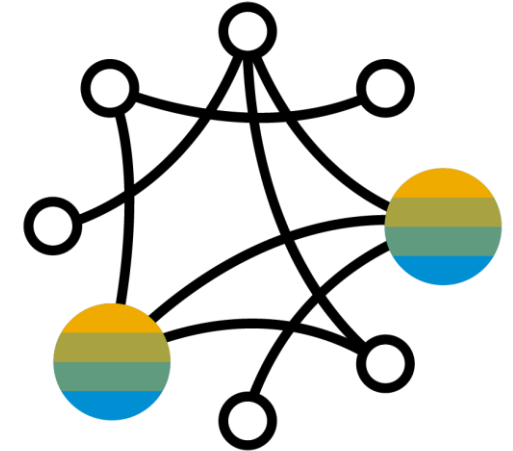
AI delivers embedded cross-sell and price recommendations, which sales can accept or decline

Product and Pricing AI - Customer Case Study

Company Overview

$4.3B Financial Services company

ML Summary

Trained on dataset of 4,972 customers, 307 products in 15,339 carts for 2 business units

Revenue uplift increase of **4.65%, $4,485,867**

Cross-sell recommendation accuracy of **85.8%**

Price recommendation accuracy of **91.3%**

Improve Sales Planning with Augmented Intelligence

Increase **Plan Effectiveness** with prescriptive AI recommendations

- Incentive Rule changes
- Quota Recommendation
- Capacity Planning

Promote **Better Sales Behavior** with personalized AI insights

- Increase personal commission and enterprise's sales

Commission Plan AI - Customer Case Study

Company Overview

$300M High Tech Software company

Key Value Drivers

Compensation plan design reduced from **4 months to 2 weeks**

Reduced Compensation Spend **$1.7M**

Increased Quota Achievement **7%**

31% Year of Year SaaS Revenue Growth

Future Innovations & Roadmap
SAP Customer Experience

SAP CX AI 2020/21 Themes

Boost Performance

- Even better scale-out of ML processes
- Hyperscaler deployment
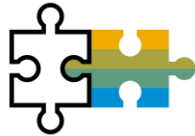
Expand

- Grow AI/ML use cases across Customer Experience
- Increase value AI/ML use cases delivered

CX AI 2020 Architecture

Cloud Load Balancer

Microservices

Master Data Services	Gateway Services	AI Services / App
Tenant Services	Integration Services	Metadata Services
Training Services	Scoring Services	

Kubernetes Cluster

SAP Datacenter

Cloud Native
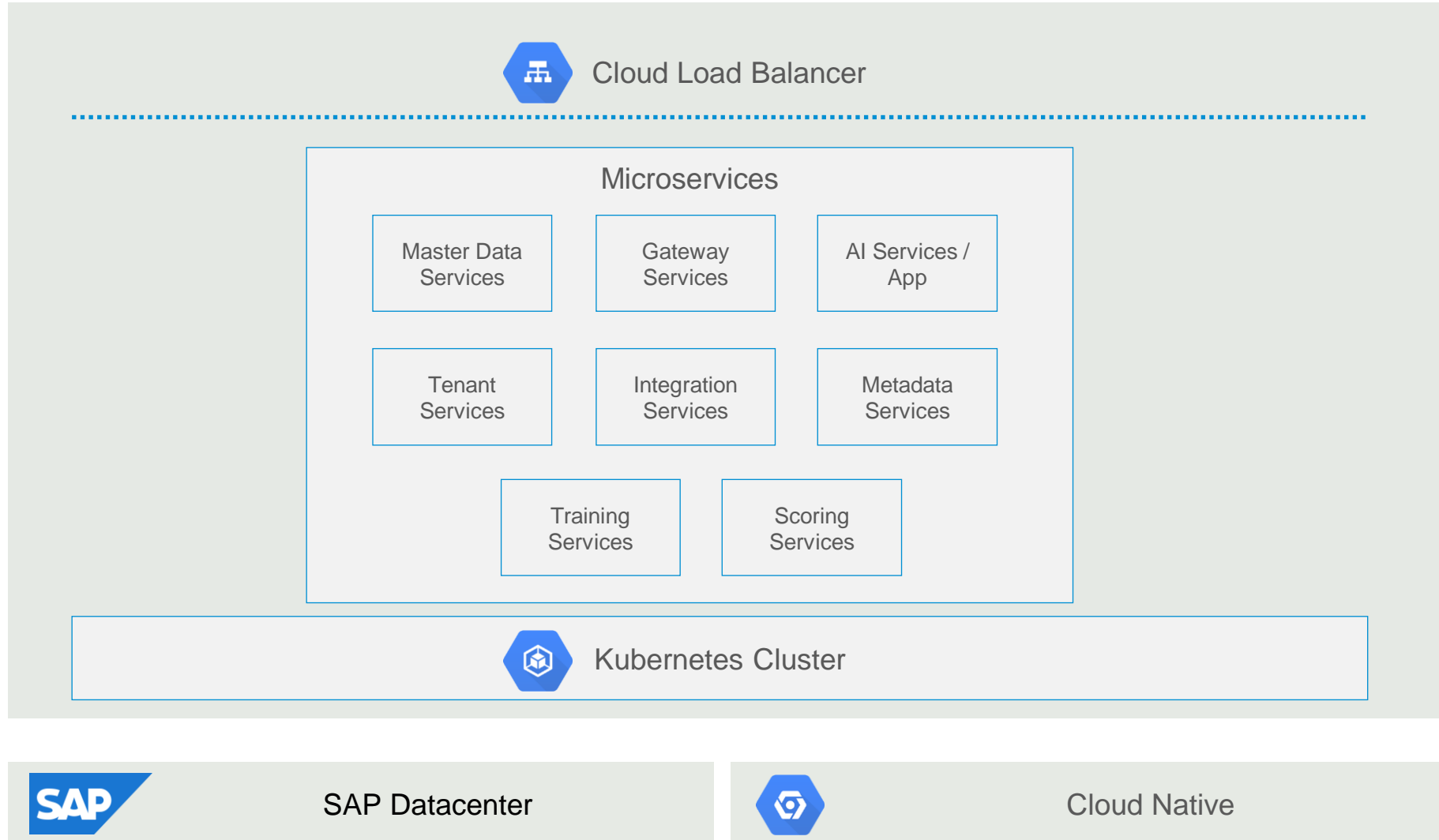
Hyper-relevant, intelligent experiences across channels

Hyper-relevant shoppable content that is consistent across experience channels and intelligently meets competing objectives

Hyper-Personalization

What is she interested in?
- Real time context
- Where is she on her journey?
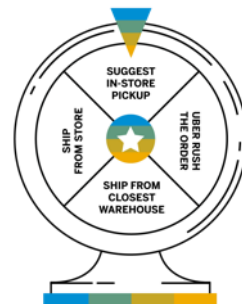
Blended Intelligence experience on any channel
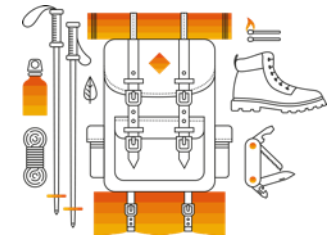
Merchandising

What do we need to push?
- Inventory position
- Profit and revenue goals

Distributed order management

How do we get the customer to the product, or the product to the customer, quickly and profitably?
- Time to ship inventory given locations
- Cost of fulfilment

Roadmap Highlights for Intelligence & Innovation

Planned Innovations
H1' 2020

Commerce
- ✓ Intelligent Product Recommendations

Cloud for Customer
- ✓ Services ML readiness check
- ✓ Enterprise Chatbot for Utilities
- ✓ Enterprise Chatbot for Insurance

Field Service Management
- ✓ Drive Time Prediction

Product / Price Recommender
- ✓ Whitespace analysis in SAP Analytics Cloud (SAC)
- ✓ Product/Price history analysis in SAP Analytics Cloud

Sales Performance Management
- ✓ Enhanced usability of Commissions Optimizer

Future Innovations
H2' 2020

AI Cloud Automation
- ➢ Hyperscaler ready for CX application AI workloads

Cloud for Customer
- ➢ Product Recommendations BETA

Field Service Management
- ➢ Spare Parts Recommendation

Sales Performance Management
- ➢ Plan Optimizer SAC available for legacy Commissions

Commerce
- ➢ AI-driven Hyper-recommendation Lab Preview

Future Outlook
2021

AI Cloud Automation
- ➢ Move customer ML workloads to Hyperscaler

Commerce Customer Data Platform
- ➢ AI for Hyper-Personalization

Customer Data Platform
- ➢ Unauthorized Instrusion detection and prevention

Cloud for Customer
- ➢ Product Recommendations General Availability (GA)
- ➢ Voice Assistant for Sales
- ➢ Service Ticket Topic Tagging and Entity Extraction

Sales Performance Management
- ➢ Commissions AI Scorecard
- ➢ Territory Quota Optimization

Field Service Management
- ➢ Time to job completion prediction
- ➢ Continuous Optimization of Technician Routes

Configure Price Quote (CPQ)
- ➢ AI Scorecard for Business ROI analysis
- ➢ Analytic extract API for AI contextual data
- ➢ Configuration recommendations

Thank you.

Contact information:

F name L name
Title
Address
Phone number

Intelligent Territory balancing and alignment
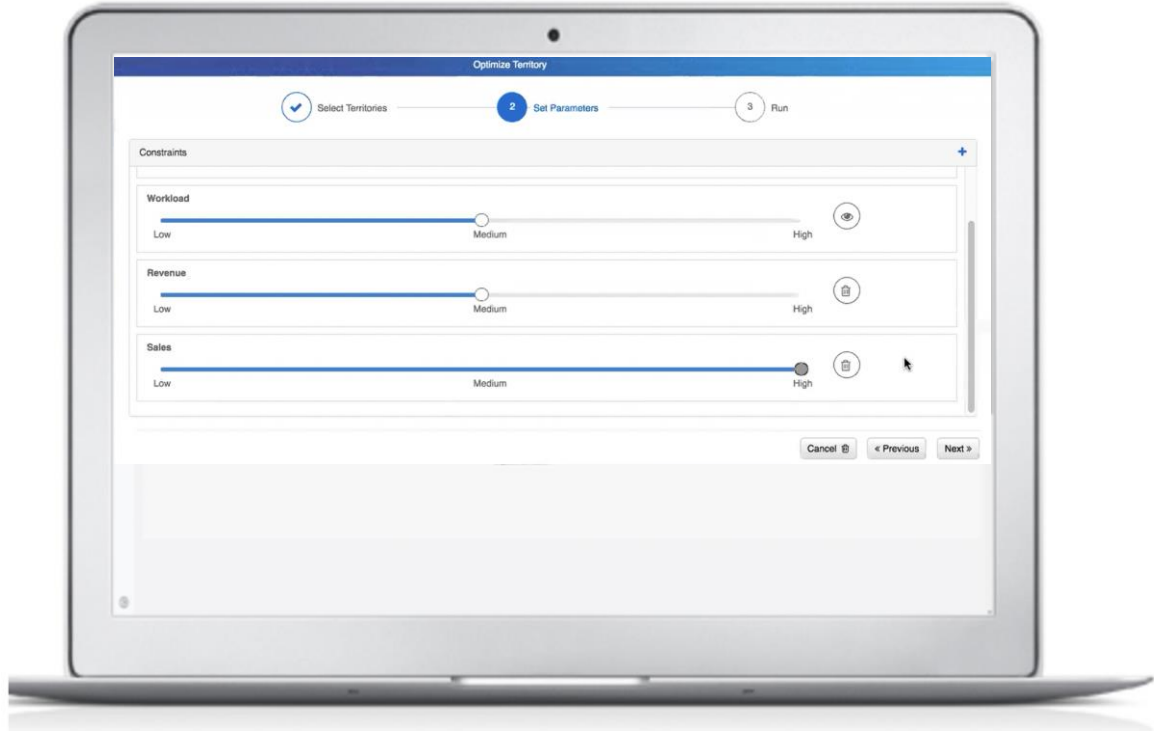
Augmented Intelligence

- Assign constraints based on business priorities

- Assign weights to match the business strategies

Intelligent Optimization

- Optimize and assign Territories and Accounts.

- Adopt intelligent recommendations

Intelligent Sales Execution – Opportunity Scoring in action

Engagement and relationships *are automatically tracked across contacts, accounts and opportunities. Contacts that reach a specific score but are not in CRM can be automatically added.*

Integrate *directly into Gmail and Outlook email and calendar's to identify who is connected to whom. Machine learning examines the frequency and type of communications, including those that aren't logged into CRM*

Recommend *next best actions to opportunity owners to get deals back on track.*

Opportunity Scores and other measures calculated using machine learning identify where strong engagement and velocity exists and where you may be falling short.

Lead Scoring

- The score indicates the likelihood of conversion of lead to opportunity.

- Rank prospects against a scale that represents the perceived value
  - 0-50   Less Likely
  - 51-75   Likely
  - 75-99   Very Likely

- Activity engagement and key factors provide additional details while assessing lead

Deal Intelligence

- Identify and prioritize hot deals. Predict the likelihood of closure

- Understand what are the key factors influencing the deal

- Avert deal disasters - Managers can get visibility into their team's pipelines without asking individual sales reps

- Key Insights - such as activity engagements, since how long the deal is in a status etc.

Ticket Intelligence – Ticket Categorization (1/2)
For Automated Service Ticket Category Mapping

What is it?

Categorize incoming tickets based on applying deep learning neural network techniques to past ticket examples

Key benefits

- Increase in agent productivity

- Better prioritization of incoming tickets

- Automatic classification based on model accuracy

Ticket Intelligence – Ticket Categorization (2/2)

Issue & Intent Identification of Incoming Inquiries

Key Capabilities

- Support for hierarchical catalog structure up to 3 levels
- Set Prediction Threshold to automate only high accuracy predictions in the UI
- Displays confidence and keywords for every prediction
- Supports categorization of tickets in multiple languages

Ticket Intelligence – Ticket Priority Detection
Automated Priority Classification of Incoming Tickets

What is it?

Predict Ticket Priority based on applying ML model on incoming inquiry description

Key Capabilities

- Select confidence threshold to filter out low accuracy predictions
- Works on custom priority values
- Priority Classification can be used for downstream activities such as Team Routing

Ticket Intelligence – NLP Classification – Product ID Entity Extraction

Automatically Identifies Product ID's from Incoming Inquiries

What is it?

Categorize incoming tickets based on applying deep learning neural network techniques to past ticket examples

Key Capabilities

- Improve productivity of the agent by pre-filling the product ID's

Ticket Intelligence – Sentiment Analysis of Incoming Tickets

	Priority	ID	Sentiment	Subject	Status	Customer	Channel	Reported On
☐	Normal	995...	☺ Weak Positive	My fridge door is not working prop...	In Process - W...	Taylor Jones	✉ Monarch Consumer Service	10/21/2019 5:3...
☐	Normal	995...	☺ Neutral	Green product is not working prop...	Open	Taylor Jones	✉ Monarch Consumer Service	10/21/2019 5:2...
☐	Normal	995...	☺ Weak Positive	Fridge is not working properly	Open	Taylor Jones	✉ Monarch Consumer Service	10/21/2019 5:2...
☐	Normal	995...	☺ Weak Positive	Fridge door does not close properly	In Process - W...	Taylor Jones	✉ Monarch Consumer Service	10/21/2019 5:1...
☐	Normal	995...	☹ Weak Negative	Missed appointment by your servi...	Open	Taylor Jones	✉ Monarch Consumer Service	10/21/2019 5:1...
☐	Normal	995...	☺ Neutral	Green product is not working prop...	Open	Taylor Jones	✉ Monarch Consumer Service	10/21/2019 5:1...
☐	Normal	995...	☺ Neutral	Fridge door does not close properly	Open	Taylor Jones	✉ Monarch Consumer Service	10/21/2019 4:5...
☐	Normal	995...	☹ Weak Negative	Missed appointment by your servi...	Open	Taylor Jones	✉ Monarch Consumer Service	10/21/2019 4:4...
☐	Normal	995...	☺ Neutral	Problems with fridge app	Open	Ralf Kammerer	✉ Monarch Consumer Service	10/21/2019 3:2...
☐	Normal	995...	☺ Weak Positive	Fridge app OS version	Open	Taylor Jones	✉ Monarch Consumer Service	10/21/2019 12:...
☐	Normal	995...	☺ Weak Positive	Fridge door does not close properly	Open	Taylor Jones	✉ Monarch Consumer Service	10/21/2019 12:...
☐	Normal	995...	☹ Weak Negative	Missed appointment by your servi...	Open	Taylor Jones	✉ Monarch Consumer Service	10/21/2019 12:...
☐	Normal	995...	☺ Weak Positive	Fridge door does not close properly	Open	Taylor Jones	✉ Monarch Consumer Service	10/18/2019 11:3...
☐	Normal	995...	☹ Weak Negative	Missed appointment by your servi...	Open	Taylor Jones	✉ Monarch Consumer Service	10/18/2019 11:1...
☐	Normal	990...		Issue with my product	Open		▦ Manual	10/18/2019 4:4...
☐	Normal	990...		Issue with Fridge	Open		▦ Manual	10/18/2019 4:3...
☐	Normal	995...	☺ Weak Positive	Fridge app OS version	Open	Taylor Jones	✉ Monarch Consumer Service	10/17/2019 12:...
☐	Normal	995...	☺ Neutral	Fridge door does not close properly	Open	Taylor Jones	✉ Monarch Consumer Service	10/17/2019 12:...
☐	Normal	995...	☹ Weak Negative	Missed appointment by your servi...	Open	Taylor Jones	✉ Monarch Consumer Service	10/17/2019 12:...
☐	Normal	995...	☹ Weak Negative	Missed appointment by your servi...	Open	Taylor Jones	✉ Monarch Consumer Service	10/16/2019 11:0...
☐	Normal	995...	☹ Weak Negative	Missed Appointment	Open	Taylor Jones	✉ Monarch Consumer Service	10/16/2019 5:2...
☐	Normal	995...	☹ Weak Negative	Missed appointment by your servi...	Open	Taylor Jones	✉ Monarch Consumer Service	10/16/2019 4:2...

What is it?

Extract Sentiment of incoming interaction

Key Capabilities

- Know the mood of the customer
- Prioritize the processing of the Ticket
- Sentiment values includes
  - 00   Not Available
  - 01   Strong Positive
  - 02   Weak Positive
  - 03   Neutral
  - 04   Weak Negative
  - 05   Strong Negative

Ticket Intelligence – Language Detection

What is it?

Extract Language of incoming interaction

Key Capabilities

- Multilingual support for language detection
- Routing of the ticket can be based on document language.
- Email Template recommendation can be made based on the document language.
- Output summary can be based on language detected.

Ticket Intelligence – Time-To-Completion

Predict on when the ticket will be closed

What is it?

Estimated time to complete & resolve tickets based on analysing past time to completion examples

Key Capabilities

- Ensure customer tickets are handled in time and in compliance with SLA.
- Give customer service manager a reference of overall workload needed and conduct proper resource planning required.

Ticket Intelligence – Machine Translation [BETA]

What is it?

Leverage ML/AI to auto-translate incoming ticket description from source language to target/logged in language

Key Capabilities

- Helps agents in processing tickets even from other languages.
- Managers can look at the text and send it to the correct team.

Solution Intelligence – Similar Tickets

What is it?

Recommends Tickets that are related to the same Issue category by looking at past examples

Key Capabilities

- Show the similar Tickets which based on the Subject and Description of the incoming Tickets.

- Agents can use this as a reference to solve the issues

- Enabling quick view of these Similar Tickets can help the agents to quickly looks in those issues.

Solution Intelligence – E-Mail Template Recommendation

What is it?

Recommends email templates based on an incoming interaction

Key Capabilities

- Recommend top 3 E-Mail templates to assist in agent productivity

- Each Recommendation includes confidence score to make the quality of prediction transparent

Intelligent Scores – Building up a real-time Customer Profile

AVAILABLE

CONTACT PROFILE

Alexander Ackermann

Auf dem Bachfeld 108.000000
Schnellmannshausen
Germany

0050569181751ed68baa644e7a...
Maintain Social Media

Activity Score — 30

Best Sending Time — Evening: 6 pm - 1...

Response Activity Score — Very high response

Personal Data   Interactions   **Scores**   Commerce   Account Team   Leads

Select Scores

☆ ⊗ Sentiment Score	★ ⊗ Activity Score	☆ ⊗ Email Affinity	☆ ⊗ CustomerSatisfactionScore
No Valuation	30	0	0

★ ⊗ Best Sending Time	★ ⊗ Response Activity Score	☆ ⊗ Latest Activity	
Evening: 6 pm - 10 pm	Very high response	Recent	

HELP   PERSONALIZE

Select Scores

- ☑ Activity Score
- ☑ Contact Level
- ☑ Latest Activity
- ☑ Lead Propensity
- ☑ Profile Score
- ☑ Recent Interactions
- ☑ Sentiment Score
- ☑ Test of heuristic Score AGE

OK   Cancel

Personalization of tiles flag those tiles, which shall be visible on the screen.

Scores created using a ScoreBuilder App within SAP Marketing Cloud

Profile can be customized by selecting relevant scores

Intelligent Scores – Using Scores in Segmentation

Segmentation Model: **CH_PredictiveDemo_SM**   ID: 440, Profile: All Consumers (B2C)

HELP   PERSONALIZATION
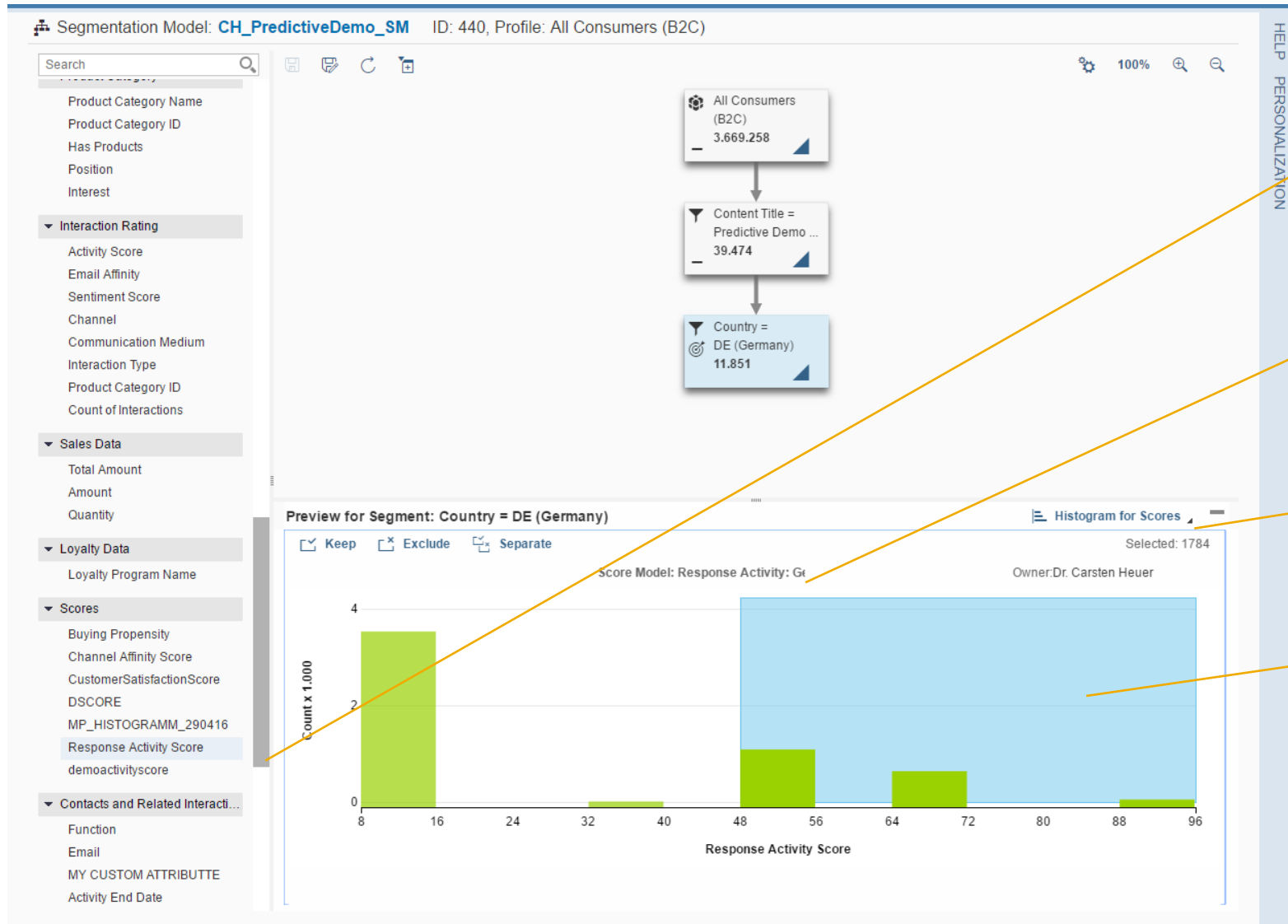
Score appears in the defined attribute group. When both segment and score are selected the scores are calculated and the distribution of the score values is shown as histogram in the preview area.

Score name and owner is shown. If the score is persisted the date and time of score calculation is displayed as well. Otherwise the score is calculated in real time; in this case no data/time information is given.

Histogram shows the distribution of score values for the selected segment.

Marked Area which selects the share of top scoring members of the segment. Press Keep-button, if these should become the next sub-segment.

Consumer Buying Propensity Model - Using Prediction scores in Segmentation

AVAILABLE

Select consumers in Germany

Select consumers with high Buying Propensity

Create target group for special offers

Create Profile with Buying Propensity Score

HELP   PERSONALIZATION

Segmentation Model: **CH_PredictiveDemo_SM**   ID: 440, Profile: All Consumers (B2C)

Search

- Product Category ID
- Has Products
- Position
- Interest

▼ Interaction Rating
- Activity Score
- Email Affinity
- Sentiment Score

▼ Sales Data
- Total Amount
- Amount
- Quantity

▼ Loyalty Data
- Loyalty Program Name

▼ Scores
- Buying Propensity
- Channel Affinity Score
- CustomerSatisfactionScore
- MP_HISTOGRAMM_290416

▼ Contacts and Related Interacti...
- Function
- Email
- MY CUSTOM ATTRIBUTTE
- Activity End Date

▼ Product-related Interactions
- PRODUCT_ORIGIN_DESC

▼ Marketing Attributes
- Company Key

▼ Possible Customer
- Possible Customer

100%

All Consumers (B2C)
3.607.269

Content Title = Predictive Demo ...
30.000

Country = DE (Germany)
8.983

Preview for Segment: Country = DE (Germany)   Gain Chart

Keep

Target Product > Comfort Giro Account

Top-Ranked Customers:	16 %
Selected Customers:	1450
Coverage of Potential Buyers:	85 %
Predicted Potential Buyers:	98
Propensity:	0,0309

Predictive Model ID: 417
Predictive Model Name: CH_Test_1608_1
Owner: Dr. Carsten Heuer
Score Calculated: Yesterday

100%
85%
Coverage of Potential Buyers
0%
0%   16%   100%
Share of Top-Ranked Customers

SAP Commissions Plan Optimization

Correlate *every compensation plan component to bookings (revenue) and deposits (incentives paid) with patent pending machine learning*

Visualize *each compensation plan component and how they correlate to deposits and bookings. The size of the bubble reflects the number of payees paid under the component. The color indicates the strength of the correlation to bookings.*

Optimize *plans with AI recommendations for each individual plan component including increasing/lowering quotas, payout rates or eliminating components. Drill into each component for more details.*

Determine quickly with the trend line whether a component is driving the appropriate business goal – revenue – or acting as a loss leader.

Rule Name: Direct Cross-Sell ACV Commission
Recommendation Text: Payout is high and participation is low. Recommend increasing quota and reducing rate.
Rule Type: Credit
End Period Name: December 2017
Unit Name: USD
Plan Name: AE Plan
Booking Correlation (color): 0.571
Payees (size): 31
Deposits Correlation: 0.707
Bookings Correlation: 0.571
Double-click to see payees using rule

How do you analyze your Performance Matrix?

- Top 10 most impacting rules for payee

- Payee's rank w.r.t. peers shown for each rule

- Used as a motivating/coaching tool

- Example:
  - Annie Stone is above median with her **ACV Commercial Annual Quota**
  - But she's lagging behind with her **ACV Commercial Commission**

Most impactful rule

Peer median

Payee position

Team distribution

Top Impacting Commission Rules for Annie St...

Impact Rank Commission Rule — Team Distribution

1	ACV Commercial Annual Quota SM
2	ACV Combined Annual Quota SM
3	CR Adjustment
4	ACV Commercial Commission
5	ACV Commercial YTD
6	YTD ACV Combined Attainment
7	Team ACV Commission CR
8	Direct New ACV Commerical Commission SE
9	ACV Combined YTD
10	USD to Local Currency Rate IR

Median   Team Distribution   Payee Value

Cross-sell & Pricing Recommendations embedded in CPQ

Recommendations alerts are delivered to Sales after products and services have been added to the shopping cart. AI evaluates each unique cart and provides recommendations. When additional line items are added or prices changed, the AI engine re-evaluates the cart and provides new recommendations immediately.

Cross-sell and Price recommendations for each line item are provided directly within the shopping cart for Sales to take immediate action.

Recommendation details provides feedback for the end-user why a particular recommendation is being made

Augmented Intelligence *offer recommendations to Sales who then rely on their knowledge and that of the customer to accept or decline recommendations.*

Pricing Insights
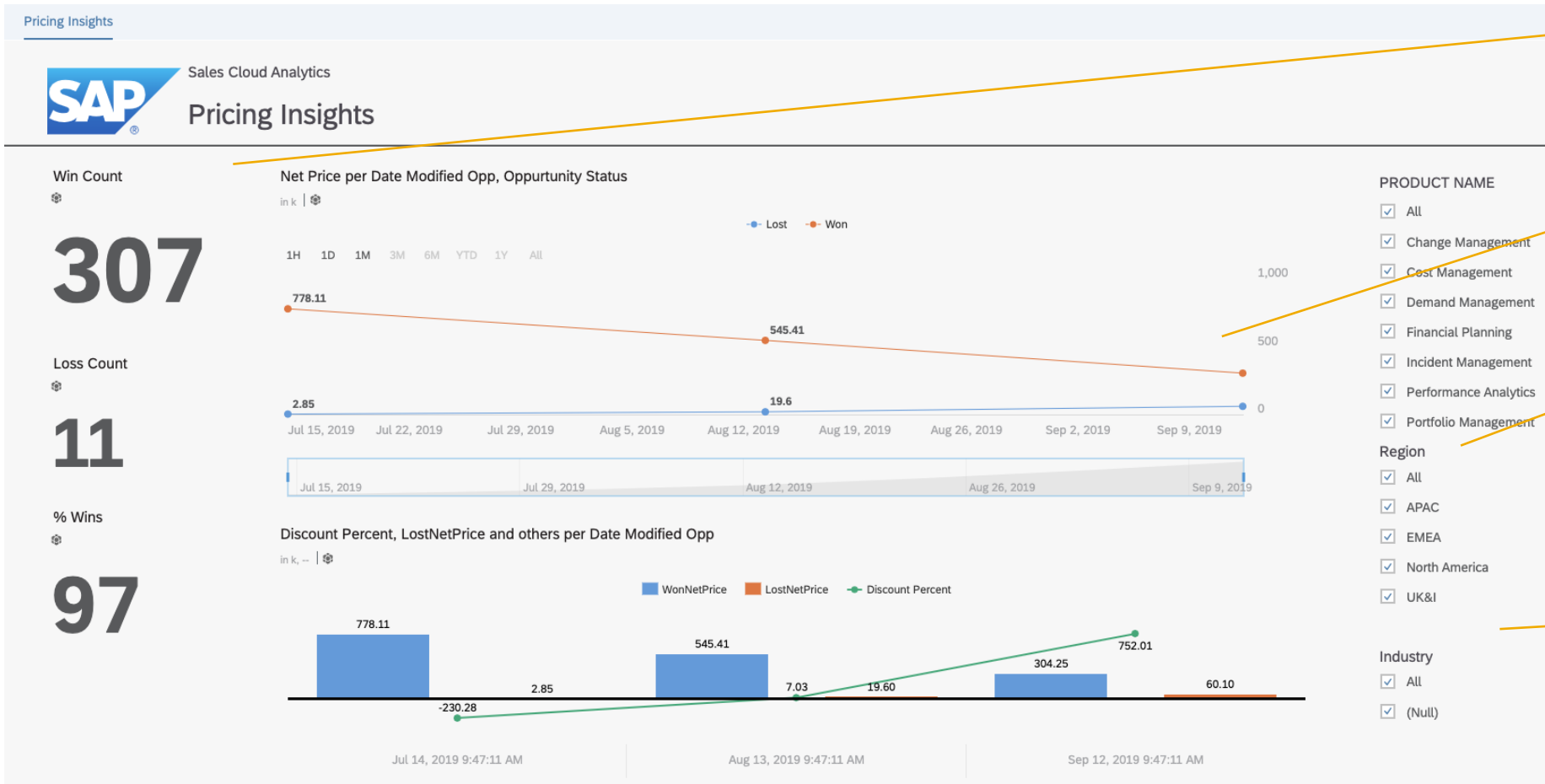
Track sales KPIs: define custom metrics such as win rate to track any metric of your choice.

Visualize: build charts to assess your pricing strategy over time.

Filters on deal and opportunity attributes help you focus on things that matter to you most.

Analytics platform allows you to build any custom analytics of your choice.

Whitespace Analysis
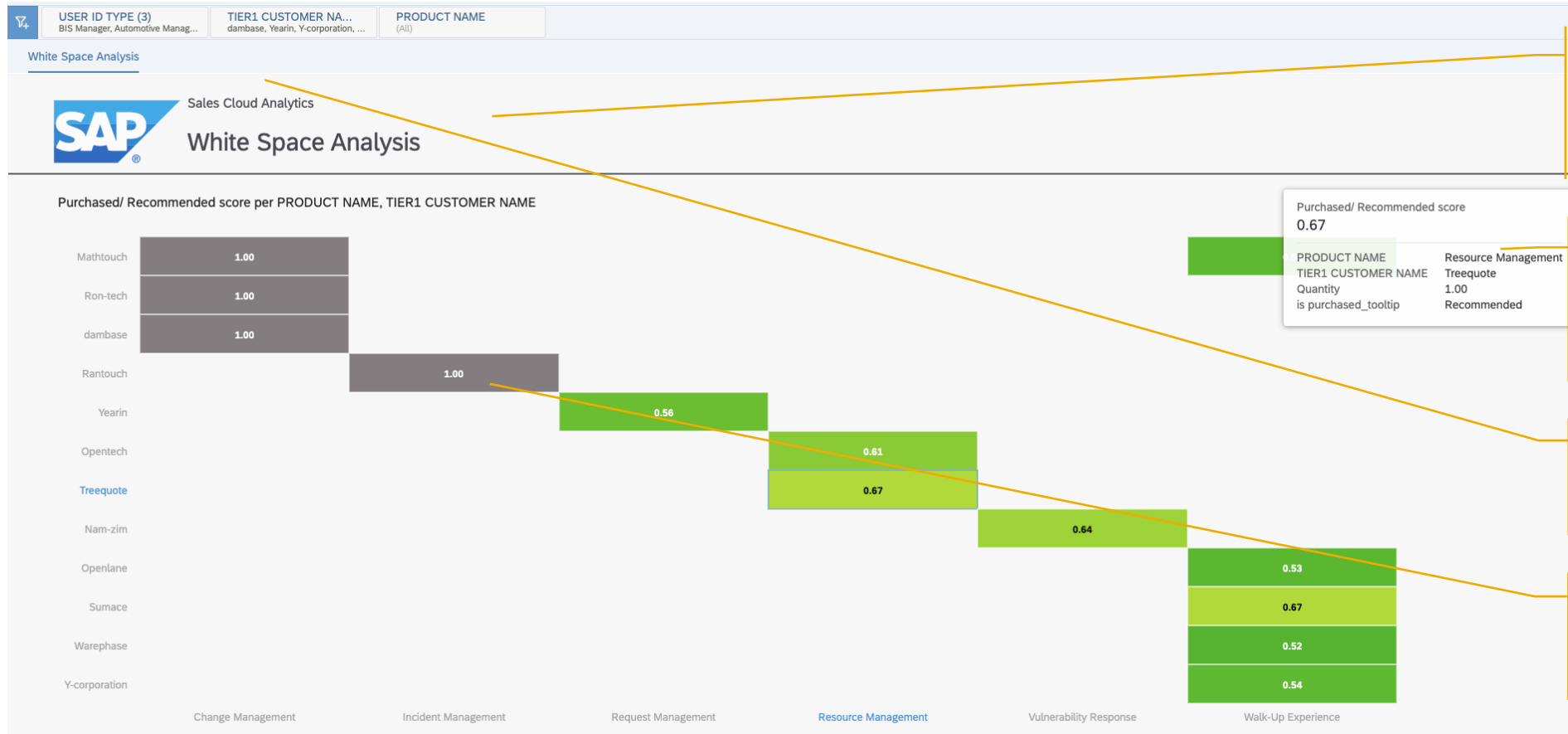
Plan your sales strategy with whitespace analysis.

Cross-sell and Price recommended products for all customers with quantity and price in one single view.

Filters to focus on subsets of customer, products, salesperson or other attributes.

Know what customers have purchased and what's being recommended.

Further Information

INTERACT

EXPLORE

CHOOSE

- SAP Customer Experience
- SAP Customer Data
- SAP Marketing
- SAP Commerce
- SAP Sales
- SAP Service

- CX Enablement Portal
- CX Webinars & Recordings
- CX Learning Journeys
- CX Newsletters
- YouTube, Twitter, Facebook
- LinkedIn, Instagram

- CX Communities:
  - Customer Data
  - Marketing
  - Commerce
  - Sales, C4C
  - Service
- CX Works
- CX Services

START YOUR JOURNEY TO 'CUSTOMER FREEDOM' WITH SAP CUSTOMER EXPERIENCE