Cisco Systems: Revolutionize Sales Strategies Through Machine Learning
SAP HANA Platform and Cisco UCS

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Sales Transformation: Outcomes-Based Solutions Through Digital Selling

Scale

- **$50B in sales**
- 380 Offices
- 165 countries serviced
- 71,000 employees

Talent

- 25,000 Engineers
- 19,000 patents
- **20,000 field employees**
  - 15,000 commissioned
  - 4,000 account managers

Partner

- **70,000 partners**
- 28,000 CCIEs
- Expanding ecosystem for IOT solutions

Digital Selling

1011
0010
0100

- **1,300 Product Families**
- 190,000 SKUs
- Evolving from hardware sales to software, cloud and XaaS sales

Outcomes

- Industry solutions
- New Consumption Models
- #1 or #2 in key markets
- 170 Acquisitions

Solving for Breakthrough Productivity

Leadership is Looking For Cross-Company Insights, But Analytics has Become Siloed

Leaders are asking their teams for:

- Consolidated reporting across all functions ("single pane")

- Real-time access to sales execution data, leading indicators

- Actionable insights; prescriptive recommendations; Available on-demand

Every sales theater, engineering group and supporting function has:

- Assigned reporting & analytics headcount

- Established data mart of corporate data through EDW queries and extracts

- Enriched their data mart with stakeholder definitions

- Authored dashboards for self-serve metrics reporting

- Engaged data scientists for predictive analytics

Strategy, Planning and Operations Teams Have Worked Independently – Opportunity for Digitization

Data Hierarchy of Needs

Transform the Business
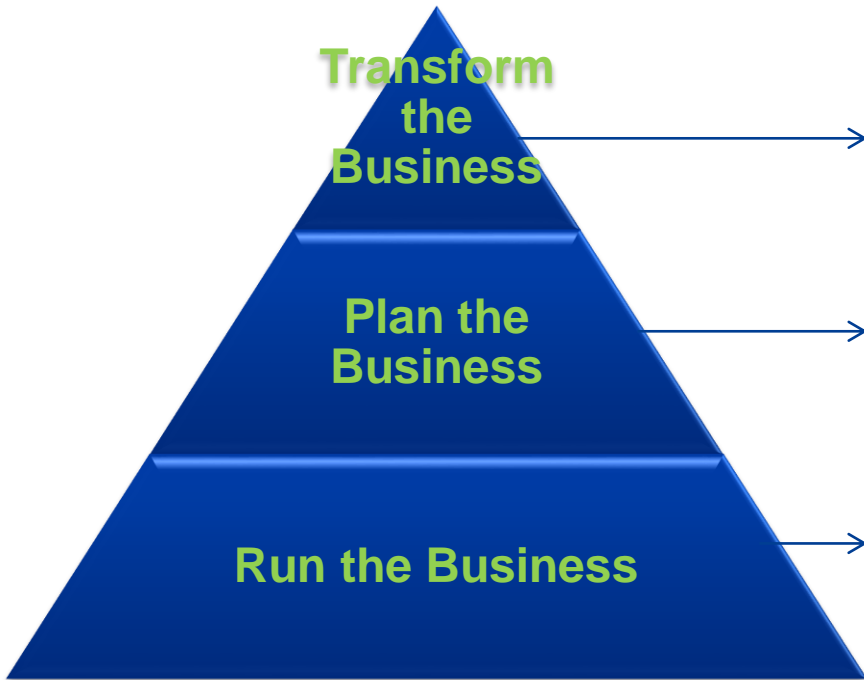
- *Predictive analytics* **to Transform the Business**
- Target Senior Leadership Team (SLT) for faster, more impactful decisions
- Example: new go-to-market models

Plan the Business

- *Advanced analytics* **to Plan the Business**
- Leveraged primarily by sales management
- Example: strategic sales initiative compensation

Run the Business

- *Reporting* **is a basic need to Run the Business**
- Leveraged by all levels (SLT to individual contributors)
- Examples: Bookings, pipeline reports

Common Data Foundation Needed

Current State Architecture
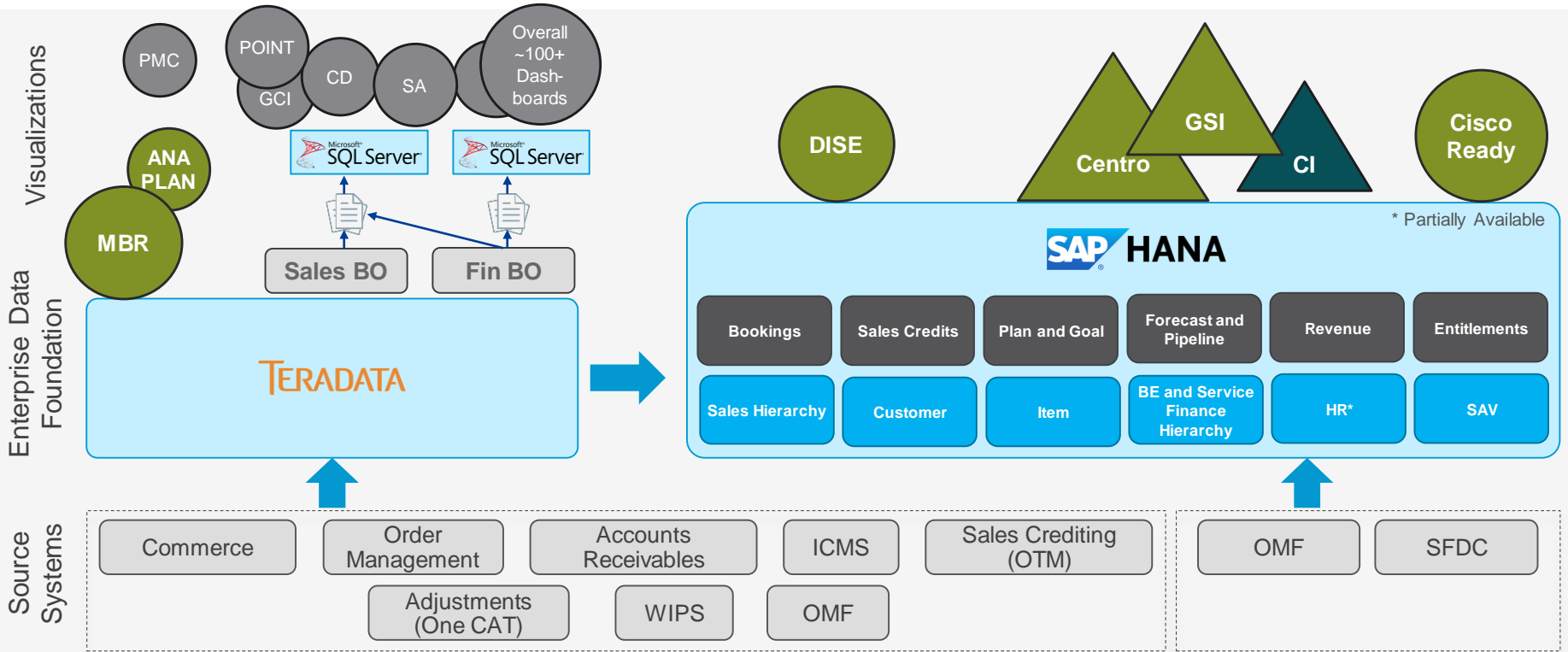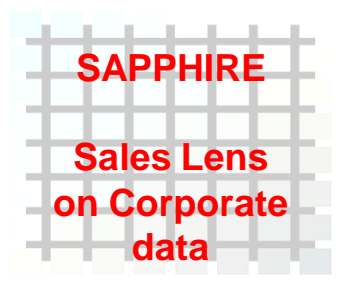
Digitizing Sales Analytics

Address with Business and Technical Architecture:

- Agile Business Architecture with consistent sales measures and metrics (one data dictionary) for consumption by sales strategy functions <u>and</u> views for sales personas

- Agile Technical Architecture to enable one sales analytics backbone with interconnected standardized metrics, measures & unified visualization

SAP HANA

B K G S	O P E X	C O M P	H R M S	S F D C	G O A L	S A V M

Territory
Seller
Partner
Customer
Technology

SAPPHIRE

Sales Lens on Corporate data
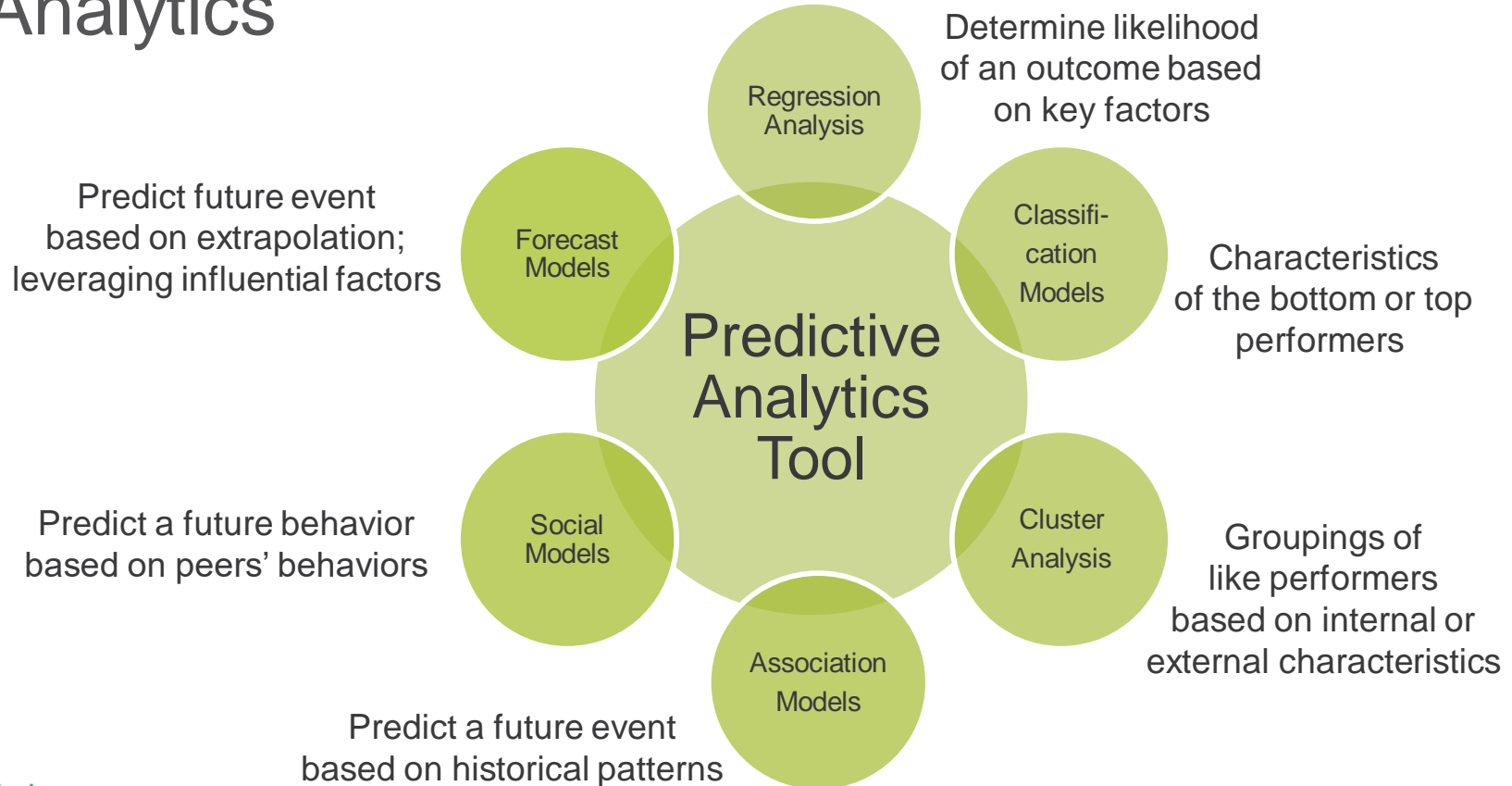
Sapphire is the best lens medium for broad spectrum and high clarity

Introducing Sapphire & Visualization – Target State

Visualizations

MBR

Sales BO

Fin BO

Enterprise Data Foundation

TERADATA

Sapphire Experience & Visualization

Sandbox	Single Pane of Glass			Transaction Systems
	Global Views	Geo Views	Analytics	

Metrics	Opty. Conversion	Bookings by Current Account View	TAO	Service Bookings by Sales Motion	Productivity	Profitability
Enrichment and Business Rules	DRR		IB Opportunity	RTnR Tagging	Discounts and BGM	

Data	Bookings	Sales Credits	Plan and Goal	Forecast and Pipeline	Revenue	Entitlements
	Sales Hierarchy	Customer	Item	BE and Service Finance Hierarchy	HR	SAV

Sapphire Data Foundation (SAP HANA on Cisco UCS servers)

Source Systems

Commerce	Order Management	Accounts Receivables	ICMS	Sales Crediting (OTM)
	Adjustments (One CAT)	WIPS	OMF	

OMF	SFDC

Leverage Data Foundation for Rapid Predictive Analytics

Predictive Analytics Tool

- **Regression Analysis** — Determine likelihood of an outcome based on key factors
- **Classification Models** — Characteristics of the bottom or top performers
- **Cluster Analysis** — Groupings of like performers based on internal or external characteristics
- **Association Models** — Predict a future event based on historical patterns
- **Social Models** — Predict a future behavior based on peers' behaviors
- **Forecast Models** — Predict future event based on extrapolation; leveraging influential factors

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Immediate Benefits – Identifying Top Opportunities

Analysis	Description	Outcome
Pipeline Analysis	Classification model that predicts the outcome of active opportunities	Provide insight to **what attributes correlate to an opportunity** decision, positively or negatively
Recommendation Model	Social Networking Model that shows Product Associations based on Customer Transaction History	Able to identify which products will sell best by customer Determine which **product families will drive security bookings**
Association Model	Social Networking Model that shows Product Associations based on customer transaction history	Understand product relationships across technologies and their **mutual growth trajectory**
Install Base Analysis	Compare current LDOS value to active opportunities in pipeline	Identify customers with **greatest refresh opportunity**

Accelerating Sales Strategy with SAP Predictive Analytics software

Sales Acceleration Cycle

Market Diagnostics (External)

Execution Diagnostics (Internal)

Growth Recommendations

Forecast

What Will Happen?
- Forecasting: doing nothing vs. "what if"

What Happened?
- Market Opportunities vs. Bookings growth
- Market share gains/losses

What Should I Do?
- Success explained: Best-in-Class product, partner, country, competitor analysis
- Product associations/bundles
- Size of opportunity prioritization
- Resource allocation

Why Did it Happen?
- Captured vs. Uncaptured business (heat map)
- Seller, BE, partner, country, competitor analysis

Pipeline Performance Analysis

Dynamically Impacting GTM Strategy

- **Challenge**: What are the challenges we are facing in our Sales Execution – GTM Strategy?
- How do we apply changes on a dynamic basis to always be prepared for changing market conditions

Solution: Looking at our historical pipeline records, we can observe which opportunities booked or were lost – further understanding what led to that outcome

Results: Provided guidance to Sales Leadership, addressed their concerns, and created impactful recommendations

Understanding Pipeline Performance

Performance and Quality

82.06%
80.04%
68.38%
53.74%
35.5%
24.98%
13.31%

10% 20% 30% 40% 50% 60% 70% 80% 90%
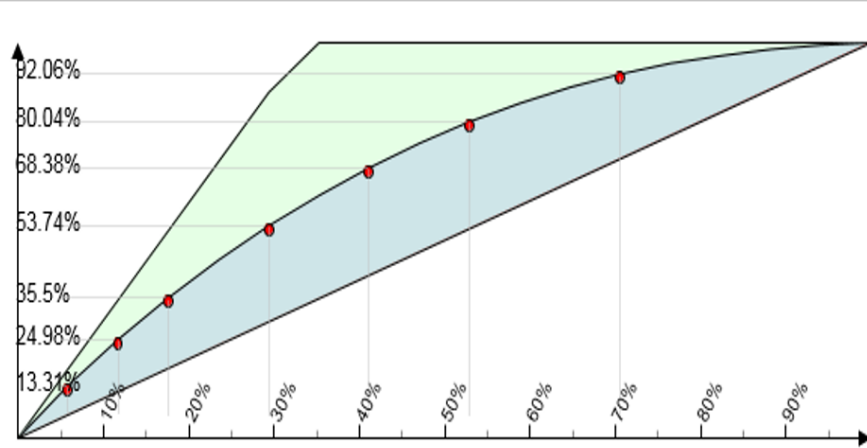
By targeting 34% of the clients we detect 60% of the entire population of interest, or 1.8 times better than without a predictive model

Variable Contribution

Less contributive (Negatively Correlated to "Cancelled")	Variable Name	Most contributive (Positively Correlated to "Cancelled")
	Length of Deal	
	Primary Partner	
	Supergroup Name	
	Sales Representative EMail	
	EBV	
	Competitors	
	Business Sub-Entity	

Green represents positive correlation to "Booked"
Red represents positive correlation to "Cancelled"

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Product Recommendation Engine

Advancing New Product Growth

- **Challenge**: How do we further advance our product growth? How do we know which customers are ready to migrate from legacy to Next-Gen Products?

Solution: Create a Social Network Analysis – gathering Customer transaction history for the past three years. We create certain parameters that link Customers with each other, as well as link Products to other Products. As a result, we create a network graph that produces Top Recommendations for each Customer

Results: Provided guidance to Sales Leadership, addressed their concerns, and created impactful recommendations

Deployment of Model

The machine learning was derived from the historical purchase trends.
The application of the recommendation will be based on the current active opportunities in the Pipeline.

Recommender: PRODUCT_FAMILY ▾   ☑ Do not recommend if already owned

SAVM_GROUP_NAME   ☐ Include Best Sellers

                                  ☐ Keep Top N   5

Get Recommendations

Recommendation	Confidence
EWMGMT	94.46%
CISE	93.96%
N9500	80.78%
UCSSCCX	80.39%
UCSSWLU	78.6%
UCSB	76.85%
AIRMSW	75.56%
C4500	74.83%
2800	74.63%
AGOTHER	73.13%
FSIGHT	72.6%
TRN CLC	71.64%
ICVSW	71.64%
UCSSCCE	70.95%
UCSSCVP	70.24%
C1UCS	70.16%
WRKAUTO	69.51%
NETWORK	69.04%
C1AIRF	68.44%

Product Association Mapping

Where are the Greatest Cross-Sell Opportunities?

- **Challenge**: How do we better align our Product Portfolio with solutions that our Customers need?

Solution: Create a Social Network Analysis – gathering Customer transaction history for the past three years. We create certain parameters that link Customers with each other, as well as link Products to other Products. As a result, we can see linkage of Products to Products – understanding our Customer's most paramount bundling patterns.

Results: Provided guidance to Sales Leadership, addressed their concerns, and created impactful recommendations