1. STRIVE FOR OPERATIONS EXCELLENCE THROUGH AI

2. INNOVATION
SUMMARY

1. STRIVE FOR OPERATIONS EXCELLENCE THROUGH AI

2. INNOVATION
AI AND INNOVATION

Sources: GrandViewResearch; BI Intelligence; Statista; Global Data; eMarketer
AI is bringing a wide scope of game-changing applications.

**Planning & Optimization**
- Deep learning
- Predictive analytics

**Machine Learning**
- Machine vision
- Image recognition

**Vision**

**Speech**
- Speech to text
- Text to speech

**Robotics**

**Expert Systems**
- Topic extraction
- Translation
- Classification

**Language Processing**

**Used for current projects**
- Used for current projects

**Being assessed for future projects**
- Being assessed for future projects
THE AI FACTORY RELIES ON A LARGE RANGE OF DATA SOURCES

SALES DATA
- Sales in value
- Product volumes
- Sales location and date

CRM DATA
- Client contact
- Segmentation
- Purchase behavior
- Opt-in/Opt-out

PRODUCT DATA
- Price
- Style Color & Size
- Product Attributes

SUPPLY DATA
- Inventory in network
- Replenishment data
- Store data

WEBSITE DATA
- Web views
- Online Conversions

OPEN DATA
- Postal code Geolocation mapping
- Special events

DATA LAKE & AI PLATFORM
AI WILL BRING A COMPETITIVE ADVANTAGE TO BRANDS: HENCE, WE ARE LEVERAGING THE BEST CAPABILITIES AND TALENTS TO ACCELERATE

Implementing opportunities

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<th>2018</th>
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<td>Prototyping &amp; validating opportunities</td>
<td>Building capabilities</td>
<td>Scaling up &amp; industrializing</td>
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### BUILD A UNIQUE TEAM OF TALENTS
- One team / One roof / One floor blending data scientists, data engineers, data developers & data managers
- Leverage agile method to foster innovation and adopt new technologies

### IMPLEMENT CUTTING EDGE TECHNICAL CAPABILITIES
- Upgrading Kering data lake to store all data sources and ensure data availability; Manage huge amount of unstructured raw data
- Leverage cloud platform (scalability, AI) and ability to rollout models in production

### FOCUS ON MVP AND INDUSTRIALIZATION RATHER THAN POC
- Strategic bias in favor of Minimum Viable Products (= the most minimal form of a complete solution) to test in real conditions as soon as possible
- Aiming for rapid industrialization at full scale for projects with proven added value

### ENSURE CLOSE INCLUSION OF BUSINESS REQUIREMENTS
- Onboarding the brands from day 1
- Starting all projects with a sponsor brand
- “The hardest part of AI is not the code, it is the change management around”

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AI & INNOVATION
WE PRIORITIZED AI PROJECTS
AMONG A LARGE SPECTRUM ON THE VALUE CHAIN

Performance management: Sales forecasting (global, country, store level)

IDEATION ➔ PROTOTYPING & VALIDATION ➔ BUILDING CAPABILITIES ➔ SCALING UP & INDUSTRIALIZING

AI & INNOVATION
FOCUS ON SUPPLY CHAIN PYTHAGORAS PROJECT: ASSIST PLANNERS IN OPTIMIZING STORE REPLENISHMENT STRATEGIES

INCREASED FORECAST ACCURACY
- ~20% more accurate on one of the categories
- Forecast "Newness" products with no historical data
- Maximize sales at full price
- Maximize gross margin

LOWER RISK OF INVENTORY SHORTAGES OR OVERSTOCK
Thanks to an improved reaction to market variability, in particular for items with a few weeks of historical data

SMOOTHER PROCESS
Thanks to a more reliable forecast and simplified validation tool

What?
- Assist planners in optimizing product quantities to ship to stores in order to reduce inventory shortages and overstocks
- Start with two categories in Europe

How?
- Develop a new AI-driven short-term sales forecast model and (as a second step) a replenishment-optimization model in close relationship with Gucci replenishment teams
- Integrate AI outputs in existing planning tools

Key milestones
- Forecast live in planner’s tools
- Rollout of forecast to all products and regions launched
- Launch study on replenishment optimization
- Expected benefits

EXPECTED BENEFITS

LIVE IN JUNE 2019
PYTHAGORAS RESULTS ARE VERY ENCOURAGING

FORECASTS VS. REAL SALES COMPARISON

PRODUCT CATEGORY A, EUROPE

Real adjusted sales

Current forecast

Pythagoras forecast

18/11/18 25/11/18 2/12/18 9/12/18 16/12/18 23/12/18 27/1/19 3/2/19 20/1/19 27/1/19 10/2/19 17/2/19 24/2/19 3/3/19 10/3/19 17/3/19 24/3/19 31/3/19

IMPROVEMENT IN SALES FORECAST ACCURACY

OVERALL PERIOD

+20%
OBJECTIVE: LIVE IN H2 2019

ECPECTED BENEFITS

HIGHER SALES

HIGHER GROSS MARGIN

OPTIMIZE WORKING CAPITAL

PROTECT BRAND EQUITY

What?

• Find out the optimal markdown level for each product
• Start with women’s and men’s shoes in Europe for new 2019 Fall season

How?

• Develop new AI-driven price-sensitive sales forecast model
• Develop a pricing optimization model

First results & next steps

• Promising results for the sales forecast: high accuracy, although some outliers need to be understood
• Price sensitivity analysis: forecasts are dependent on prices and this sensitivity is variable across products
• We are running optimization methods to find the best combination of discounts
BEYOND SUPPLY AND SALES, WE BELIEVE THAT AI WILL HAVE A WIDE IMPACT ON A LARGE RANGE OF KERING ACTIVITIES

AI CAPABILITIES

LEGAL
- Counterfeit detection
- Trademark tagging on product images

CUSTOMER SERVICE
- Inbound message ranked by priority
- Personalized e-mail proposition

MEDIA
- Media spend optimization (precision marketing)

TALENTS
- Resume screening
- Employee churn prediction
- Career path counselling

Planning & Optimization
- Machine Learning
- Image Recognition
- Language Processing
- Machine Vision
- Expert Systems

Used for current projects
Being assessed for future projects
ARTIFICIAL INTELLIGENCE & INNOVATION

1. STRIVE FOR OPERATIONS EXCELLENCE THROUGH AI

2. INNOVATION
INNOVATION AT KERING

OUR MISSION

• Have a 360° view of key innovation trends
• Prioritize key disruptions
• Drive value by integrating disruptions into our business (through proof-of-concept and investment)
INNOVATION GOVERNANCE

KERING INNOVATION ADVISORY BOARD

EXTERNAL NETWORK OF KEY PARTNERS

INNOVATION EXPLORERS

Gucci
Saint Laurent
Balenciaga
W&J brands

Kering Eyewear
Alexander McQueen
Bottega Veneta

AI & INNOVATION
INNOVATION ROADMAP

1 DISRUPTIONS IMPACTING OUR BUSINESS MODEL

MATERIAL DISRUPTIONS

NEW BUSINESS MODELS
New ways to consume luxury (e.g. subscription, second hand, rental)

New ways to engage with consumers

2 TECHNOLOGIES IMPROVING VALUE TO CUSTOMERS & OUR PERFORMANCE

IN-STORE / ONLINE / CLIENT SERVICES
In-store: Technologies to augment Client Advisors
Online: Technologies to improve user experience and drive more conversion
Client services: AI-based technologies to augment Client Services Advisors and improve performance and monitoring

3 ENABLERS

INNOVATION ECOSYSTEM SET-UP
Partnership with Venture Capitalists
Start-up scouting

TECH SCOUTING
Blockchain
Voice / Chatbot
Image recognition

INTRAPRENEURSHIP / CULTURE
Idea crowdsourcing
Co-design
INNOVATION FUNNEL

INVESTIGATION
1 IDEAS
• Assess tech/solution maturity
• Assess what is at stake
• Identify use case

EXPERIMENTATION
2 POC
• Test feasibility
• Test fit with business need
• Identify features that deliver the most value

PROJECT
3 MVP
• Roll-out at small scale
• Maximize learnings for the least efforts

LIVE
4 ROLLOUT
• Run in production
• Deploy

FOCUS
Prioritized list of use cases

RESULTS
Go / No go on feasibility & usability
Feedback on solution
Industrialized version of solution

Note: POC: Proof of concept / MVP: Minimum Viable Product

AI & INNOVATION
Voice & Text assistant to help Client Advisors with retail procedures in order to maximize selling time on the sales floor.

**Benefits for the User**

- **Save time:** Get an easy and immediate access to complex procedures
- **Better serve:** Provide answers on after sales cases without leaving the customer
- **Better train:** Facilitate the training of new hires

**Approach**

- Small-scale field experimentation to test in quick, agile way
- **Technology:** Natural Language Processing
- **KPIs:** Understanding / Accuracy / User experience
- **Next step:** Deploy in additional stores and add new languages
Blockchain: early stage technology but high disruption potential

Various projects in progress to test where Blockchain brings the most value

Agile approach to enable:
- Quick test-and-learn
- Iterative development
- Client/Partner feedback at small scale early on in the process
HOW WILL WE MEASURE OUR SUCCESS?

World-class ecosystem accelerating innovation vision and projects at Kering Houses

Through business impact

POC or MVP run with proven positive impact on business practices

Deep expertise serving Kering Houses for a particular project