

# GNOSS Graph Data & Analytics applied to Adveo Group for demand predictive analytics and dynamic price management

Semantics 2019. The Power of AI and Knowledge Graphs. Karlsruhe, Sept. 9–12, 2019

Susana López Sola, 10<sup>th</sup> September 2019

- About GNOSS
- Knowledge Graphs in the market
- About Adveo
- The challenge and the approach
- Creating the Adveo's Knowledge Graph: two IA intelligence tools
- Demo

# About GNOSS

# Our mission

- We are a technological SME that has been working for more than 15 years in the construction of Knowledge Graphs and the Web of Data (Semantic web)
- Who collaborates with organizations in transforming human intelligence into technological intelligence ...
- And that promotes the development of the socio-digital life, of the extension to the web of the life of the companies and organizations



We work in Spain, with offices in Bilbao and Logroño (La Rioja)



# More than a decade building a Knowledge Graph engine

Since 2004 we have been working in the construction of ...

knowledge base on which to offer intelligent services of natural language understanding and entity extraction (NLU / NERD).

A Deep Artificial Intelligence Platform based on the exploitation of semantically interpreted multilingual Knowledge Graphs, which allows:

**TO REPRESENT KNOWLEDGE → TO OPERATE AND CALCULATE IT → TO LEARN**

A set of technological services on existing platforms on which to deploy GNOSS and operate it as a service (SaaS and On Premise)

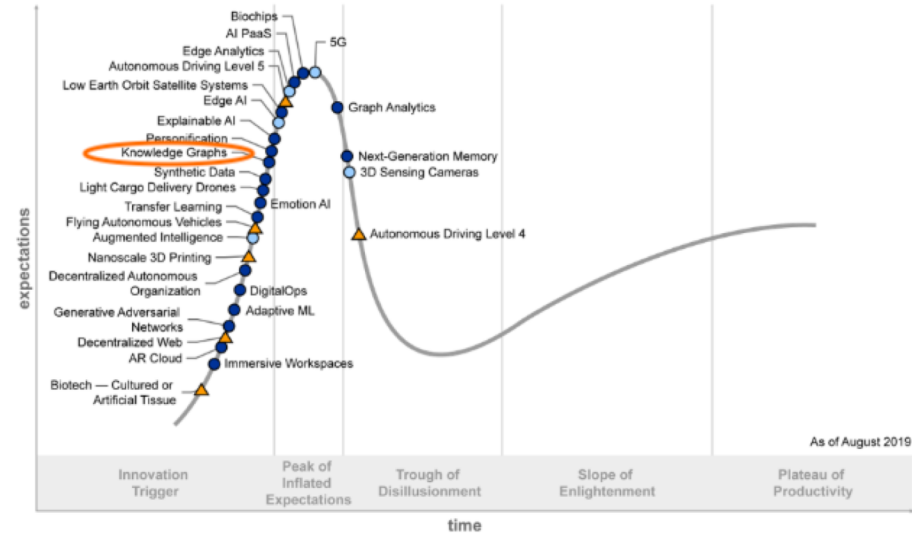
# Knowledge Graphs as the future of AI

2019

Gartner includes again Knowledge Graphs as Emerging Technology in its Hype Cycle

Figure 1. Hype Cycle for Emerging Technologies, 2019

## Hype Cycle for Emerging Technologies, 2019



Source: Gartner  
ID: 370466

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Gartner

## Emerging Technology Trends 2019



### Sensing and Mobility

- 3D sensing cameras
- AR cloud
- Light-cargo delivery drones
- Flying autonomous vehicles
- Autonomous driving Levels 4 and 5



### Augmented Human

- Biochips
- Personification
- Augmented intelligence
- Emotion AI
- Immersive workspaces
- Biotech (cultured or artificial tissue)



### Postclassical Compute and Comms

- 5G
- Next-generation memory
- Low-earth-orbit satellite systems
- Nanoscale 3D printing



### Digital Ecosystems

- DigitalOps
- Knowledge graphs
- Synthetic data
- Decentralized web
- Decentralized autonomous organizations



### Advanced AI and Analytics

- Adaptive machine learning (ML)
- Edge AI
- Edge analytics
- Explainable AI
- AI PaaS
- Transfer learning
- Generative adversarial networks
- Graph analytics

Technology

As of July 2018

Plateau of Productivity

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GNOSS





**Knowledge  
Graphs!  
At last!**

(By Roy Lichtestain)

# GNOSS in Adveo Project

The intelligent heart of ADVEO information systems

Bringing deep knowledge to Adveo's e-Commerce strategy

# Why the project?

The **office supply sector** in which ADVEO operates, has suffered a **profound transformation** which affects all the processes of the value chain and which, in the last five years, has been highly destructive to the value of those actors who have been unable to adapt, but have instead continued operating in accordance with traditional ideas.

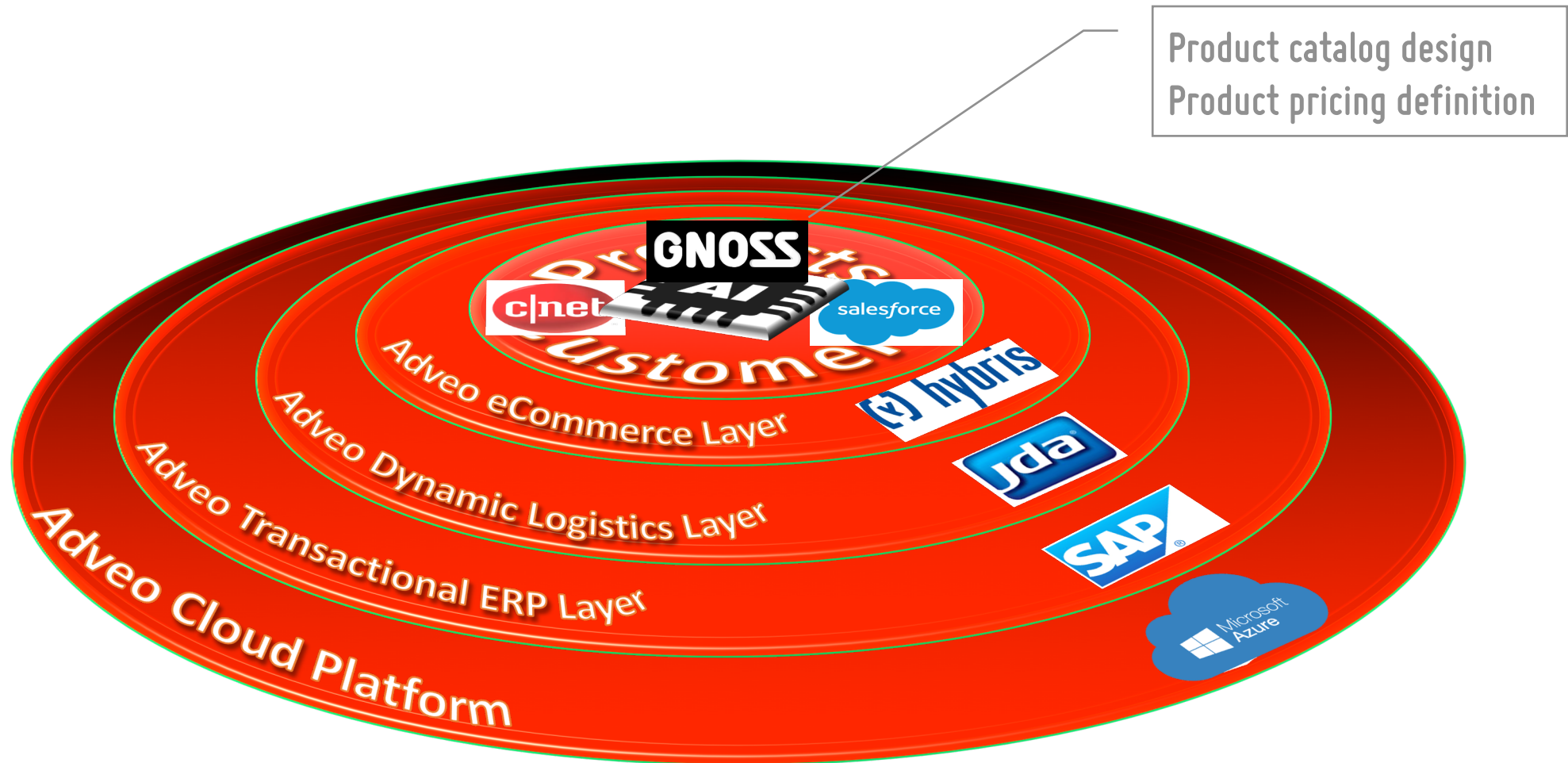
**“It is about selling more, but above all, better.”**

**YES! but, how? With more, better and more accurate,  
but above all, more intelligent new technology.**

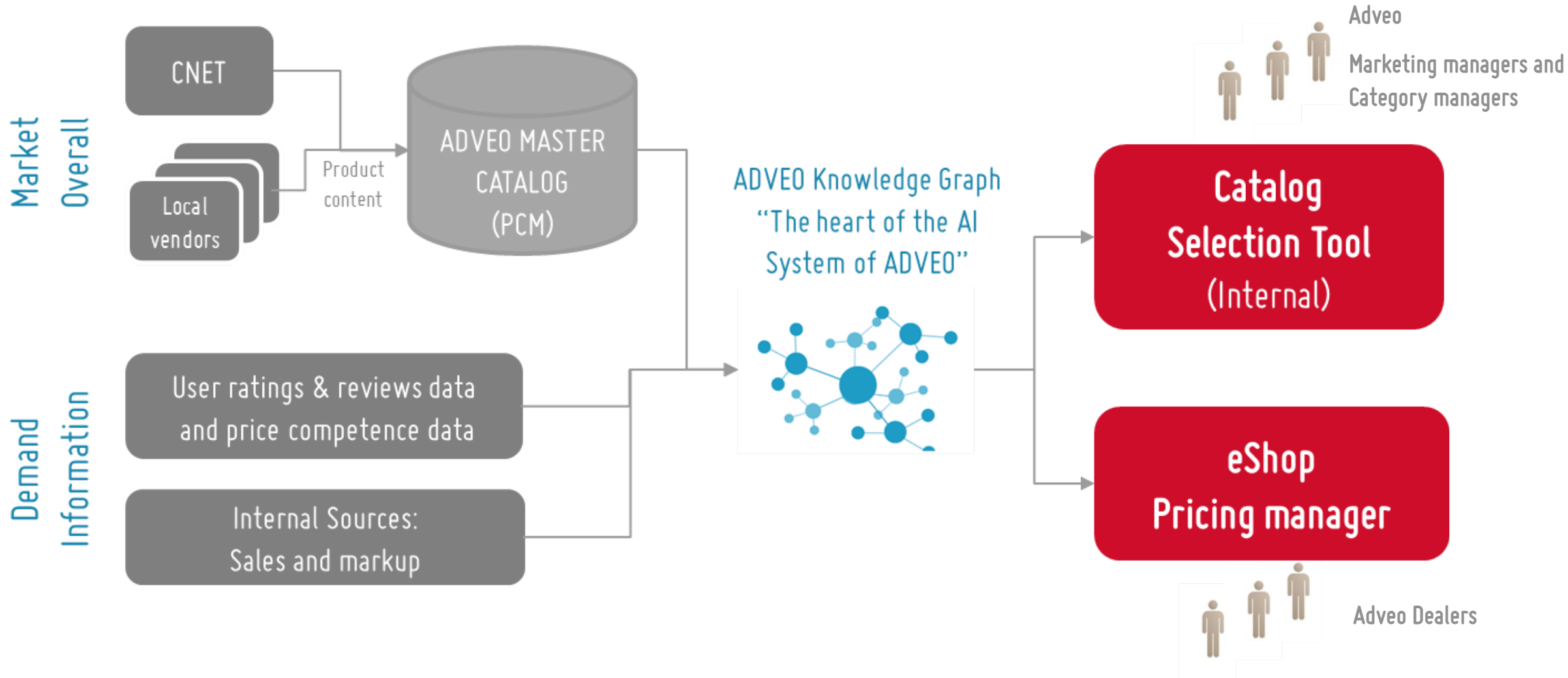


# ADVEO SMART Digital Platform →

GNOSS Deep AI platform engine improves decision making in two critical processes of the company



# Building a UNIFIED AND INTERROGABLE Knowledge Graph. Put all the data to work!

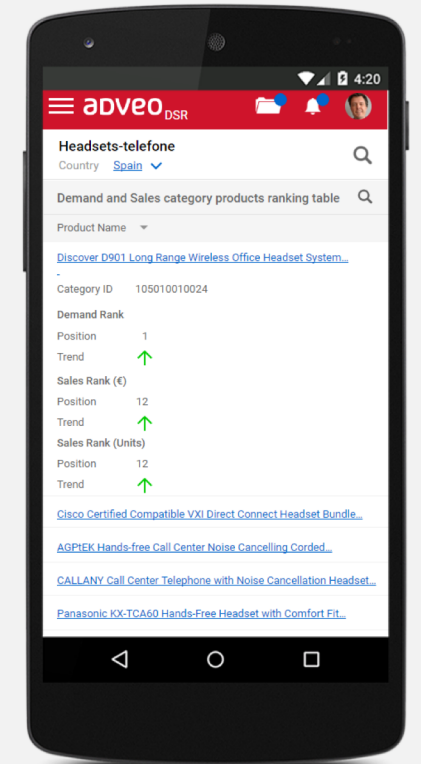
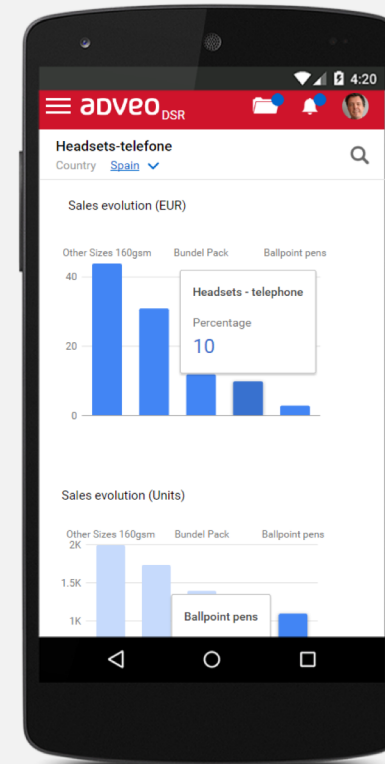
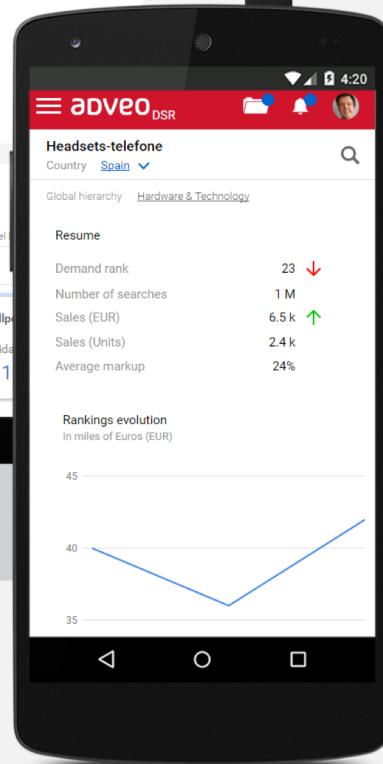
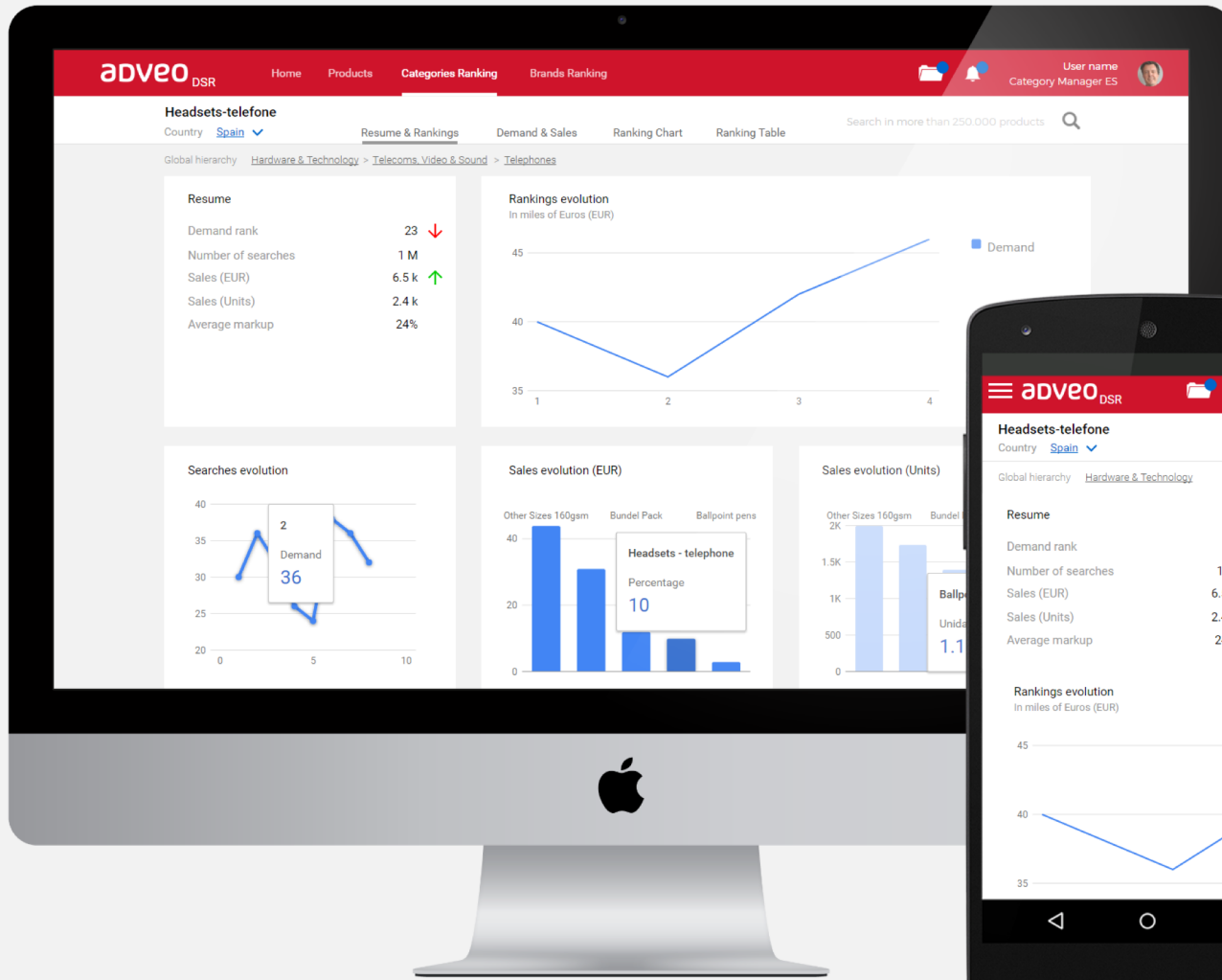


A Knowledge graph that improves decision making in two critical processes of the company



# Selector tool

- ✓ Best product assortment
- ✓ A real time catalog defined with demand information



“If you don't know what your customers want, then you can't buy properly”

# Pricing manager tool benefits for the dealer

The screenshot displays the Adveo Pricing Manager interface. At the top, there's a search bar and a 'Publish prices' button indicating 1280 products pending update. The main area shows a list of products with columns for 'Edited price', 'Margin', and 'Dealer'. A 'Pricing profile' dropdown menu is open, showing options for 'Default', 'Pricing role' (with sub-options 'Conservative' and 'Aggressive'), and 'Margin'. A welcome message box is overlaid on the product list, stating 'Welcome Adveo, DealerSSO to admin area' and providing a link to edit the profile. The interface also features sections for 'New recommended prices', 'Best rated by users', and 'Emerging products', each with product details and pricing information.

- ✓ Dynamic pricing recommendation: aggressive and conservative
- ✓ Competence prices info
- ✓ Easy pricing edition
- ✓ Sophisticated pricing profile management:
  - ✓ Rules at global level
  - ✓ Rules by category
  - ✓ Rules by branch
  - ✓ Rules by ABC classification
- ✓ Pricing publication integrated with ERP & eCommerce

# “Buy well to sell more and better”. Virtuous circle of ADVEO's business ecosystem



**adveo** eShop

**THE ULTIMATE PRO ONLINE  
SELLING SUITE TAILORED FOR YOU**

Use case: <https://www.gnoss.com/en/resource/adveo-group-a-business-brain-powered-by-gnoss/10eb7d46-612f-4a63-a34f-23bdbc44f2a7>

Video: <https://www.youtube.com/watch?v=KnWKgObmmQY>

# Demo

# Thank you!

[susanalopez@gnoss.com](mailto:susanalopez@gnoss.com)

[gnoss@gnoss.com](mailto:gnoss@gnoss.com)