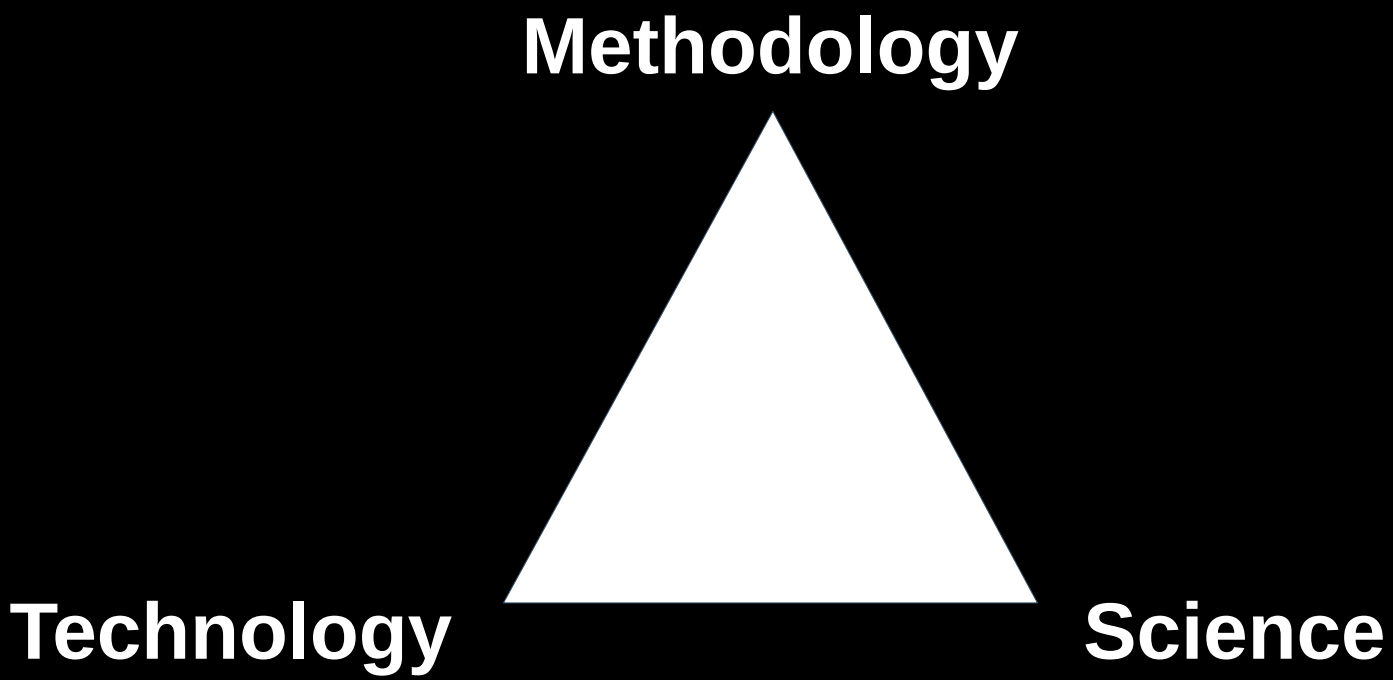
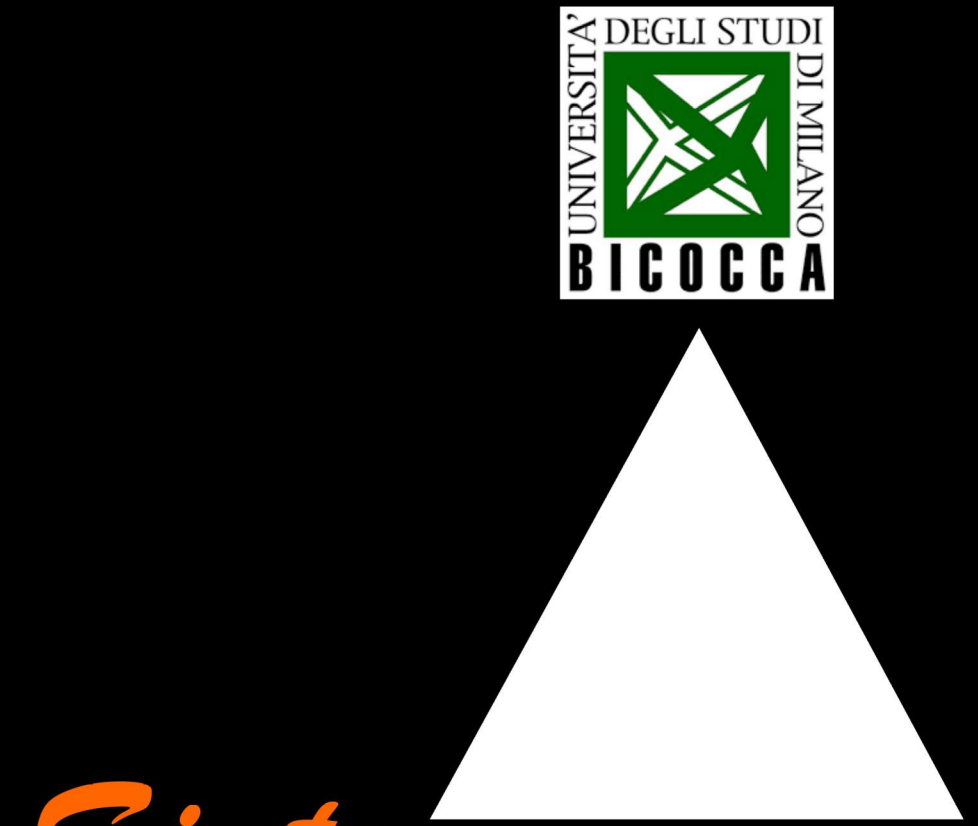
Welcome

Sinte



Sinte



Sinte

Sinte

IT vanguard for business
www.sinte.net

Approach

1) **First party solutions** → complete responsability of the development

   (our code)

2) **Adaptation to the needs** → ~~We know how you have to work~~ - We **have to** know how you work

   (analysis as the key of project's success)

3) **Modular development** → reusability of code for speed and robustness

   (OOP Objects Oriented Programming)

4) **Abstract approach** → keep development under control

   (UML Unified Modelling Language design)

5) **Lateral thinking** for innovation → "Everyone has always done in this way" is not necessary a value

   (new ideas and prototyping)

6) **Continue updating** → To be always on the bleeding edge of the technology

   (35% R&D investment)

Sinte

25 years of innovation (a)

Starting from the past millennium several innovative jobs:

- **1999** **Live Streaming** with Nilla Pizzi during Sanremo Festival
- **2000** **Live Streaming** of the first version of Italian “Big Brother”
- **2000** Nixie: one of the first **e-commerce** case of success in Italy grown up till the creation of physical shops (followed by many e-commerce sites such as the actual: sportit and dimanoinmano)
- **2001** **e-learning** Interactive solution for Sanofi (Pharma company) (slide sync with streaming and tests)
- **2001** A very automated **network** of 54 sites of the 54 towns of the future Monza Province, with events, appointments and databases of useful information
- **2002** Complete **automated online Catalogue** with CD syncing for Selva (the biggest furniture company in Italy)
- **2002** One of the first editorial **online magazines** for EditriceTemi (followed by many other success cases with EditorialeDirecta, Sunnycom, Motonline, EditorialeDomus-Quattroruote, Radiolombardia, Accordo.it, ...)
- **2002** A flash screensaver for all ST Microelettronics PCs in the world to celebrate their 15th year.
- **2002** One of the first **social community** in Italy for Radiolombardia (Discoletto) (4 years before Facebook)
- **2002** **Online catalogue for the photos** (RM and RF) for Olycom (the biggest Italian photos agency) with millions of records
- **2003** A very modern site for the 10 cinema in Monza, allied to create a “virtual” multiplex to fight real multiplex. Programming, automated newsletter, booking and purchasing of ticket
- **2003** A **multiporpouse ERP** for the CRAL of Banca Popolare di Milano – managing 40M € / year, from food, to vacations, from jewels to consultant.
- **2004** **Georefering** Selva’s shops in all Europe with map and information to get to the nearest one (2 years, before Google)

Sinte

25 years of innovation (b)

- **2005 In browser 3D projects solutions for Rifra in Flash technologies (ActionScript)**
- **2005 Management software for a Clinical Center, with innovative engine for appointments.**
- **2006 A virtual runners' and triathletes' solution for Happyrunner that became one of first five in Italy (it has reached more then 1.300 members).**
- **2007 Interactive flip system** to consult research results of Roche for their Intranet
- **2008 Innovative Intranet** for Havi, international logistic company (supplier also of McDonald's all over Europe)
- **2009** Module to interact with Regione Lombardia **certified by SISS** (smartcard for public health)
- **2010** One of the first **radio app** in Italy (live with titles in streaming and on demand) for Radiolombardia,
- **2010** Powerful **crawler** for fashion (collecting articles and advertisement)
- **2011** One of the first live **assistant with videochat** in the Tisettanta outlet website
- **2012** Innovation of accordo.it getting the biggest italian **web community** (more than 30.000 users)
- **2013 Forecasting** solutions for McDonalds'
- **2013 Meta analysis** to extract precise quantitative evaluation from huge scientific literature for Sorin
- **2014 Big Data Solutions** for Sky (billion of records with thousands of features) in support of Adobe Systems.
- **2014** The first **industrial app** in the world to manage big production machine **via modbus** (initially refused by Apple because they didn't even understand the scope!)
- **2014** A revolutionary **3D app** that reproduce a physical game of Geomag
- **2015 Real time advertising solution** for Sky

Sinte

25 years of innovation (c)

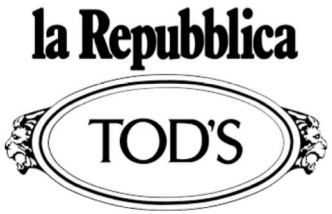
- **2016** A powerful search engine for e-commerce sites, with similarity and automated filters
- **2016** **Antichurn** **web application for Italtel presented at MWC**
- **2016** An innovative **messenger** which represents the mood of users in the balloon for YouBalloon
- **2016** **Editorial recommendation** for Deutsche Welle's AppleTV app.
- **2017** **Collection and analysis of online advertising** for JCDecaux
- **2017** **E-commerce recommendation** for sportit.com
- **2017** Analysis of the web to **map customer satisfaction** of brand and its competitors for Vodafone
- **2018** **CRM Enrichment** for Banca Intesa
- **2018** **Hand writing recognition** for Generali
- **2018** **Meta-sotware** for McDonald's and Aspis
- **2019** **Unstructured data discovery** for Essilor
- **2019** **Recommendation engine** for the Marketing of GEDI (Gruppo Espresso)
- **2019** **Smart living** project with Evolvere
- **2019** **Industria 4.0** project with Italbond
- **2020** **Fake news identification** with "Il Messaggero"
- **2020** Artificial Intelligence for **industrial optimization** with Luxottica
- **2020** **Innovative GDPR solution** with many automations for Essilor

Sinte

25 years of innovation (d)

- 2021 **High quality leads generation** for Quattroruote with artificial intelligence
- 2021 **Automatic Data discovery and Masking** engine for Primeur
- 2021 Deep learning engine to **identify users behind anonymous television** for Mediaset
- 2021 **Automatic survey** using artificial intelligence for Vinhood
- 2022 **BI** solution for McDonald's restaurants
- 2022 **Meteo forecasting** solution for ARPA
- 2023 Use **Artificial Intelligence Bot** to identify specialistic topics for Il Sole 24 Ore
- 2023 **Document data extractor** to create structured data from huge ammounts of documents for Aromata
- 2023 **Automatic objects recognition** in industry to monitor production for FHP
- 2024 Use a proprietary **AI NLP** to identify topics of websites to create interests user profiles for TIM
- 2024 Use a modern **Statistical Learning Engine** to help Coripet to find the best are where to install the recycle machines.
- 2024 Advanced **IA Time Series Models** to assist Unieuro in the selection of advertising investment to maximize revenues.

Sinte


la Repubblica
TOD'S

GENERALI

Roche

i'm lovin' it

ALPITOURWORLD

LAPRESSE
WHERE THE NEWS IS

GRUPPO MONDADORI

PROVINCIA DI ROMA

Provincia di Milano

PROVINCIA MONZA BRIANZA

TIM

MEDIASET

QUATTRORUOTE

BANCA POPOLARE DI MILANO

UNIVERSITÀ DEGLI STUDI DI MILANO

CANCOM.GOV.IT

MerloniProgetti

GEDI
GRUPPO EDITORIALE

ESSILOR
SEEING THE WORLD BETTER

retelit

CANALI

Tisettanta

DOLCE & GABBANA

JCDecaux

BAYER

Tre.it

CORPet
BOTTLE TO BOTTLE

HAVI

Salvatore Ferragamo

vodafone

nielsen

SORIN GROUP

GEOMAG

unieuro

FLA
FEDERLEGNOARREDO

FEDERMOBILI
FEDERAZIONE NAZIONALE
NEGOZI ARREDAMENTO

FANUC
ROBOTICS

ADmantX
semantic advertising data

sky

INTESA SANPAOLO

GRUPPO AZIMUT
AZIMUT
LA DIREZIONE PER INVESTIRE

FINECO
BANK

ITALTEL

YOOX

ENGINEERING

LUXOTTICA

FINCANTIERI
FUTURE ON BOARD

ARPA

contactlab
engage personally anywhere

EDISON

Il Messaggero

Sinte

But also a lot of business as usual

- hundreds of **customers**
- hundreds of **websites**
- tens of **apps**
- tens of management **software**
- tens of **infrastructures** managed
- hundreds of **hostings**
- tens of **housings**
- ...

Sinte

Infrastructure

- 30 physical superservers in different webfarms around Europe
- More than 150 Virtual Servers
- More than 400 managed domains
- More than 5.000 mailboxes on our mailserver
- More than 500 web application developed

Sinte

Competences

- Software
- Web (e-commerce, e-learning, streaming...)
- Mobile apps
- Data collection
- Security
- Image analysis
- IT infrastructures
- Hosting & housing
- System integration
- Statistics
- Big data solutions
- Data science
- Data visualization
- Semantic
- Machine learning and deep learning
- Artificial Intelligence
- Usability

Sinte

smartstat : Sinte's spin-off

Business Science
for governance, competition and innovation
www.smartstat.it

Sinte

Linking two wor(l)ds to share value

Sinte

Mission

- Fill the gap between the big amount of meaningfull data and the power of methodology’s vanguard
- Fill the gap between the data and the information needed
- Use data:
  - to forecast,
  - to deeply know your own market,
  - to intercept signals of changes ...
- To provide companies the powerful tools to guarantee their future prosperity

Sinte

The duty to innovate

“That's the way it's always been done” is often the reason to behave in a new way

Quite always solutions:

- Are not written in manual
- Are not stored in paradigms
- Cannot be found in the past

We all have to:

- Think in a new way
- Look for correlations
- Use imagination
- Focus on continue confrontation with academic research

Sinte

What we use

- **Machine learning**: all processes are developed in solution able to continously learn from the data flow to:
  - improve performance
  - identify seasonality
  - adapt to the continues changes
- **Artificial Intelligence**: our systems are a complex structure of software solutions capable to simulate human ability to learn from reality and to adapt to it
- **Embedding of human intelligence** know-how: use of Bayesian models to allow human to teach the engine how to better do its job
- **Neural Network**: Simulating the approach of human brain in some situation systems are able to achieve impressive results in term of performance and delivery time
- **Deep learning**: with the heavy use of neural networks we can easily develop powerful deep learning solution
- **Vanguard sophisticated models**: we usually develop solutions using all the bleeding edge model of the international statistics research accessing to the source code and modifying them according to our needs (for instance we have used genetics biostatistical models adapted to analyze cookies)

Sinte

Innovative approaches

- Beyond one-size-fits-all solutions -> **ad hoc solution**

  Agnostic and continuously updated approach towards:

  - technologies
  - statistical models

- Beyond just big data -> **complex data**

  Open mind approach using not "superclean" data and looking for innovative ideas to improve their informational power.

  Crucial step is data assessment to feed models with meaningful data – to do this most innovative and sophisticated models and approach are needed (if not we get “garbage in - garbage out”).

- Beyond “data science” -> **Business Science**

  Approach situation as a real scientists.

- Beyond “analytics” -> **stylization**

  Always towards new way to see the data according to the sensibility, the time and the needs of management.

- Beyond “look alike” -> **functional profiling**

  We started from the beginning approaching our project with functional profiling.

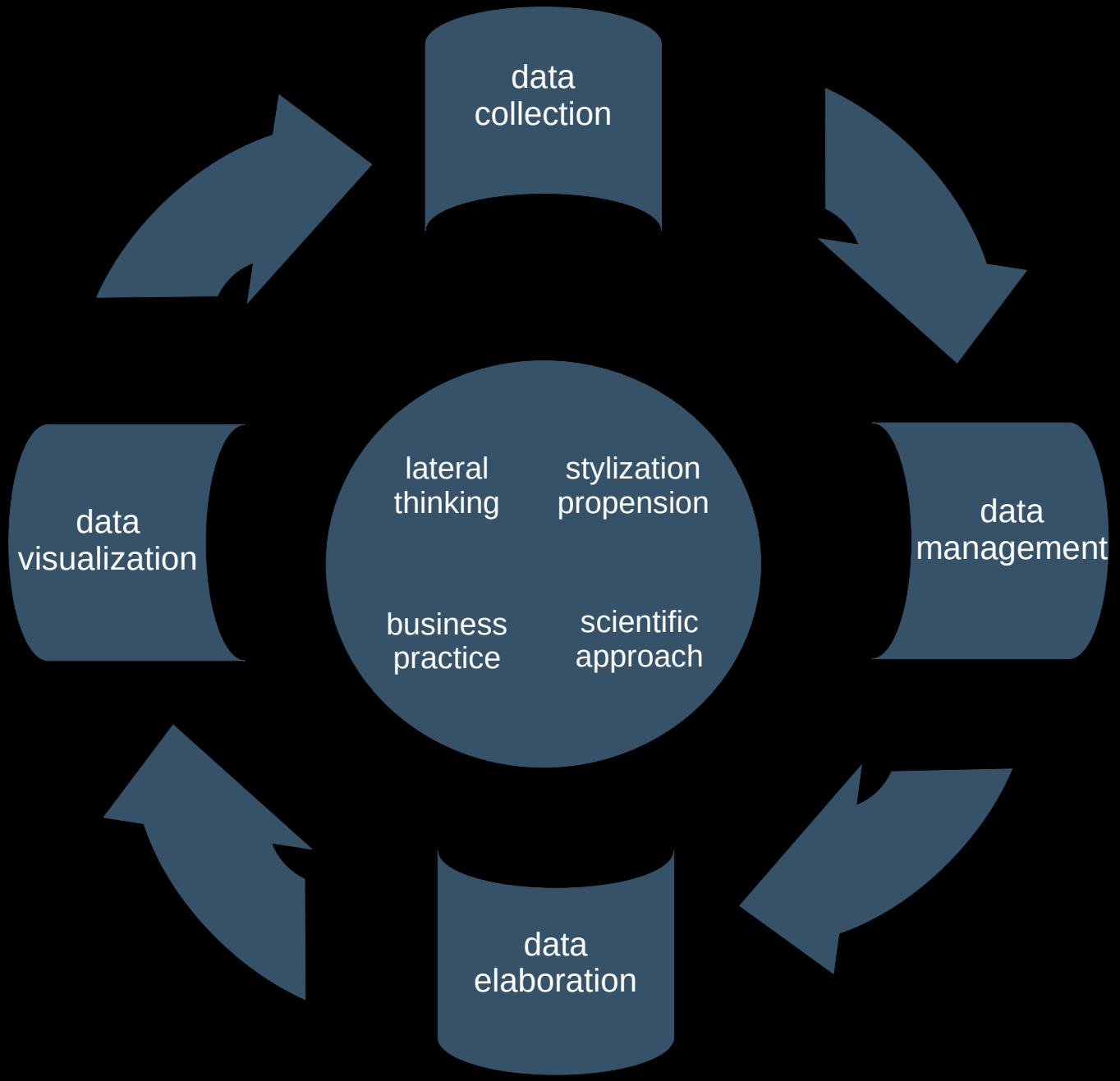
Sinte

Cloud approach

- Use resources on demand (machines or managed services)
- Use scalable container approach (Kubernates)
- Use scalable platforms (Hadoop, Spark, Kafka, Cassandra…)
- Write highly scalable code
- Provider independent (AWS, Google Cloud Platform, Azure)
- Automatic deployment (Ansible, Chef…)
- Several cost optimisation solutions

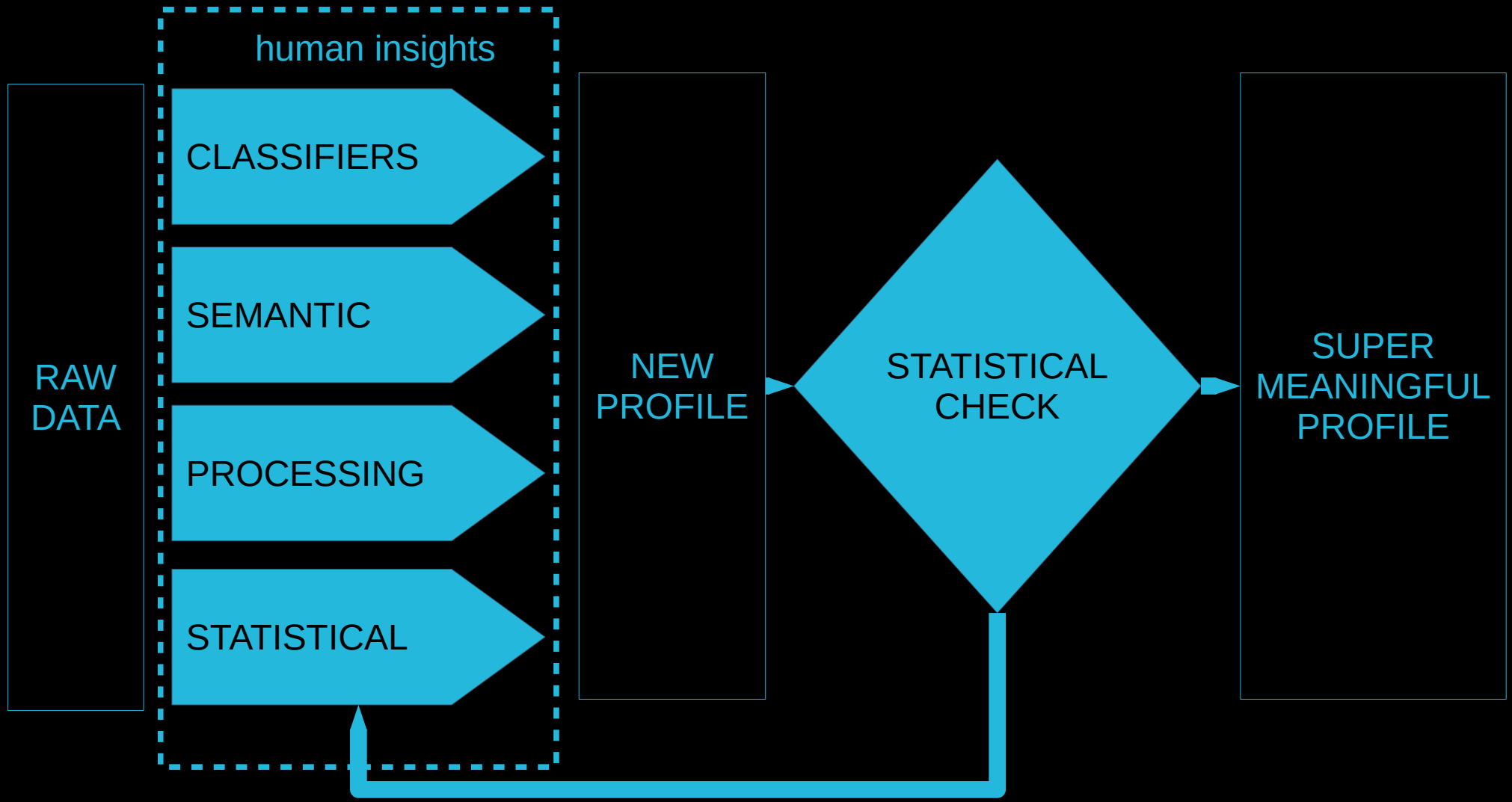
Sinte

Recursive approach



Sinte

Features quest



Sinte

The only Statistics University
in Lombardia

Sinte

Advantages

- Work side-by-side with many researcher and professors in different specialisation
- A network of researchers from all the world
- Contact with all the top students in data-science in Italy

Sinte

Bicocca University departments

- **Economia**, metodi quantitativi e strategie di Impresa
- Scienze economico-aziendali e diritto per l'economia
- **Statistica** e metodi quantitativi
- **Giurisprudenza**
- **Medicina** e chirurgia
- **Psicologia**
- **Biotecnologie** e bioscienze
- **Fisica** "Giuseppe Occhialini"
- **Informatica**, sistemistica e comunicazione
- **Matematica e applicazioni**
- **Scienza dei materiali**
- Scienze dell'**ambiente** e della Terra
- Scienze **umane** per la formazione "Riccardo Massa"
- **Sociologia** e ricerca sociale

Sinte

Some cases

- Technology
- Semantic
- User profiling
- Recommendation
- Visual information
- Time series
- Unstructured data
- Ranking
- Image recognition
- BI solutions
- Industry
- Mobile app
- Science

Sinte

Technology

Sinte

Big data delivery

- **Request**: An alternative to current solution that delivered the day by day needed information in more than a week.
- **Approach**: Using big data platform (Cassandra + Hadoop) we designed a data model that fit the need and we ingested all their data.
- **Results**: a solution which gives the result in **less then 4 hours** .

Sinte

Cloud orchestrator

- **Request**: Use cloud services to easily scale and reduce IT effort but significantly reduce costs
- **Approach**: Move all application in highly scalable infrastructure, switch on and off resources according to real needs and buy them in bidding
- **Results**: Cost saving up to **more than 80%**

Sinte

Time Machine backup on cloud

- **Request**: Create a fast and reliable backup solution able to recover the situation in each moment in the past, occupying less space as possible and keeping cost under control
- **Approach**: Using S3 with all its power
- **Results**: A solution able to return to the situation of each moment of the past which occupies just the **space of different versions** of files

Sinte

Real time big data modeling

- **Request**: A solution able to update tens of millions of profile everyday, to calculate a vector of score for each ones and to deliver “Call to Action” in realtime on webpages.
- **Approach**: Implement Kafka + Hadoop + Spark for profiling and a smart caching solution for the delivery.
- **Results**: Our solution import data from many sources (Webtrekk, DMP, CRM), recalculate all the score during the night in **less than 3 hours** and the call to action engine gets the information in **less than 5ms** on every impression.

Sinte

Semantic

Sinte

Sentiment in political themes - 1

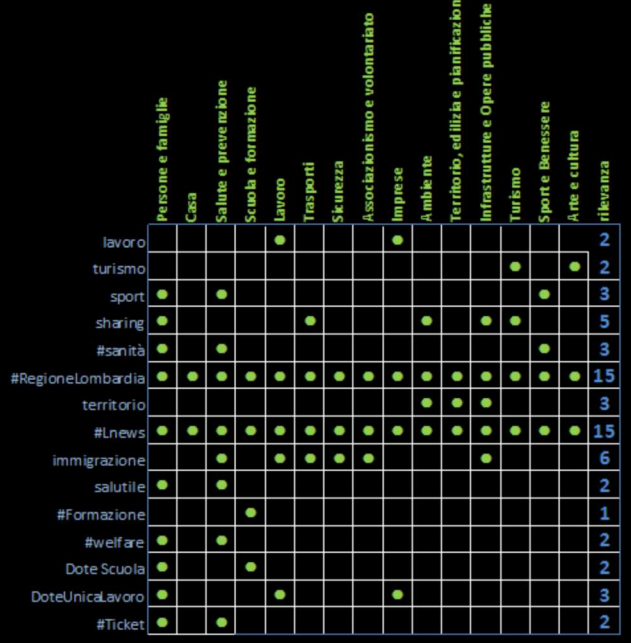
- **Request**: An observatory for opinion on social network about political subjects
- **Approach**: Using a mix of text mining, semantic and sentiment algorithm and high customised mathematical model we create an engine which analyse what people says in Twitter about themes given in input by our customer
- **Results**: a solution which gives the ratio between **positive and negative sentiment on every theme** the politicians are interested in.

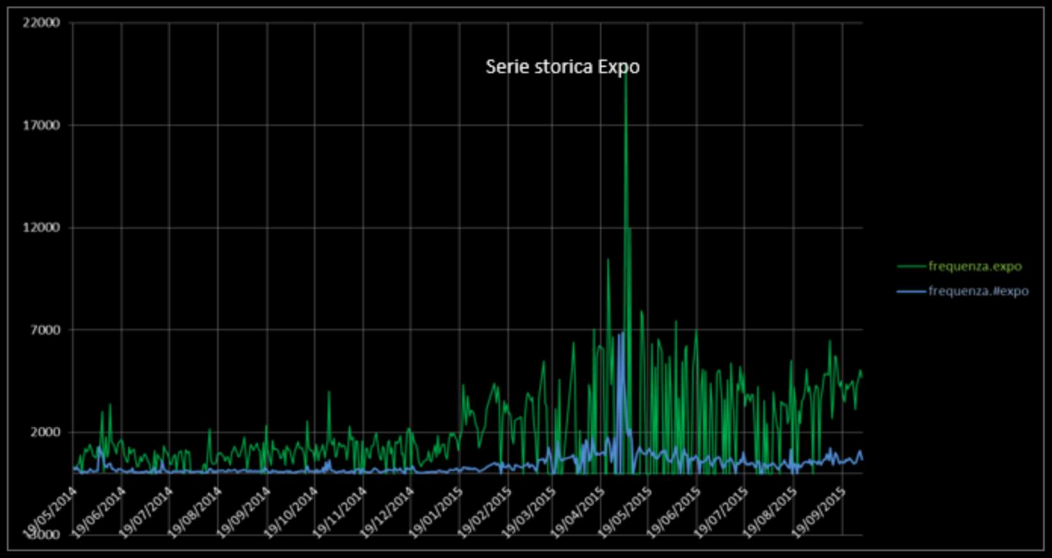
Sinte

Sentiment in political themes - 2

TIPO ACCOUNT	QTA'	%
Generico	4779	98,6%
Istituzionale	66	1,4%
TOTALE	**4845**	**100,0%**

KEYWORD/#HASHTAG	TWEETS
lavoro	1514
turismo	475
sport	356
sharing	182
#sanità	56
#RegioneLombardia	56
territorio	28
#Lnews	23
immigrazione	23
salutile	9
#Formazione	7
#welfare	6
Dote Scuola	4
DoteUnicaLavoro	2
#Ticket	2
RECORDS TOTALI	**16047**





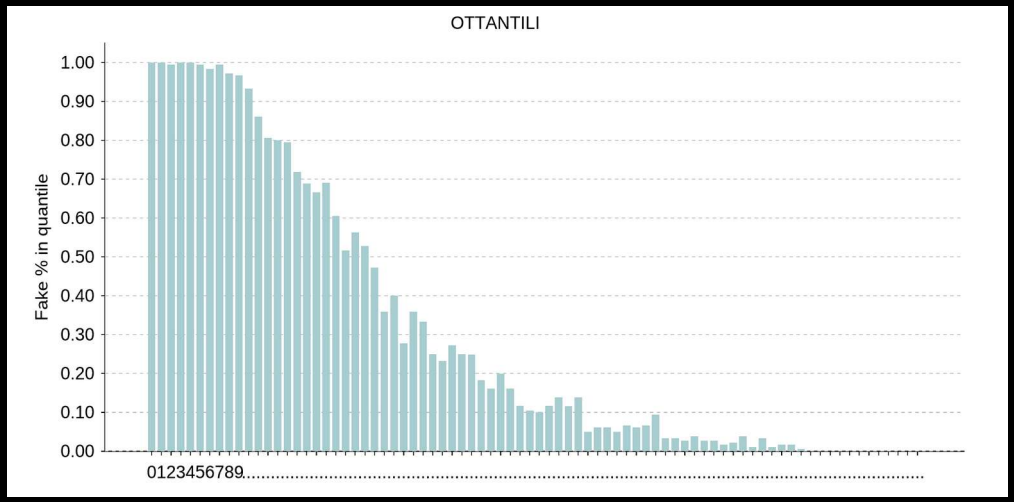
Sinte

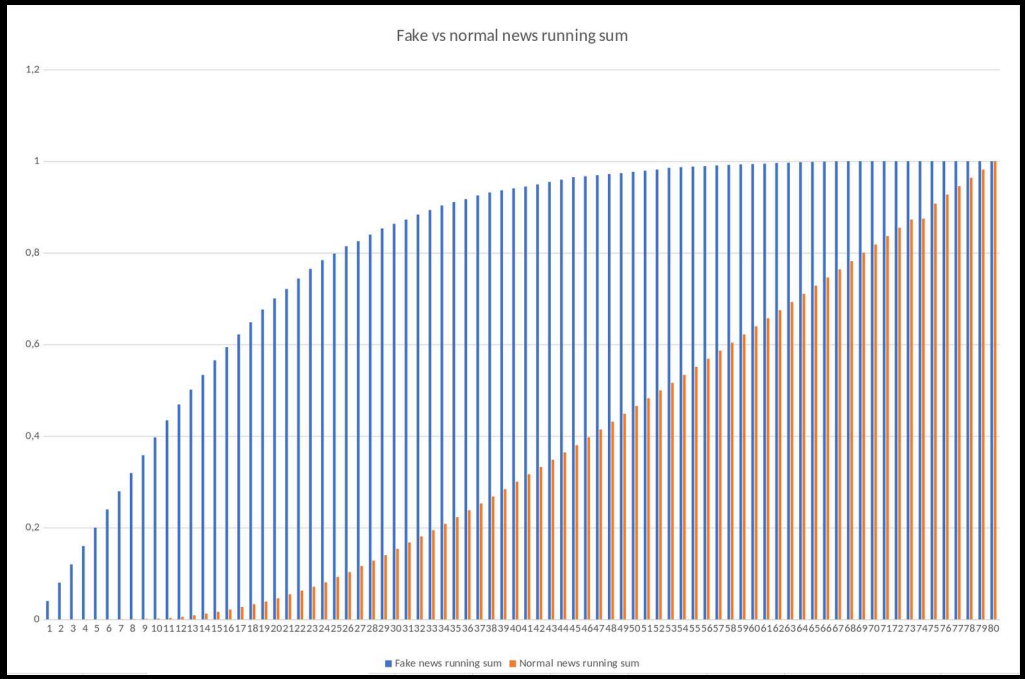
Fake news identification - 1

- **Request**: Create a model able to assign a score to every news on the Web to misure the probability that it is a fake news.
- **Approach**: Feeding AI models with data from semantic analysis and technical data of the page we create an engine able to answer to every URL analysis request with a “Fake news index”.
- **Results**: **more than 70%** of fake news and **less than 5%** of not marked news in the top 25% higher score.

Sinte

Fake news identification - 2





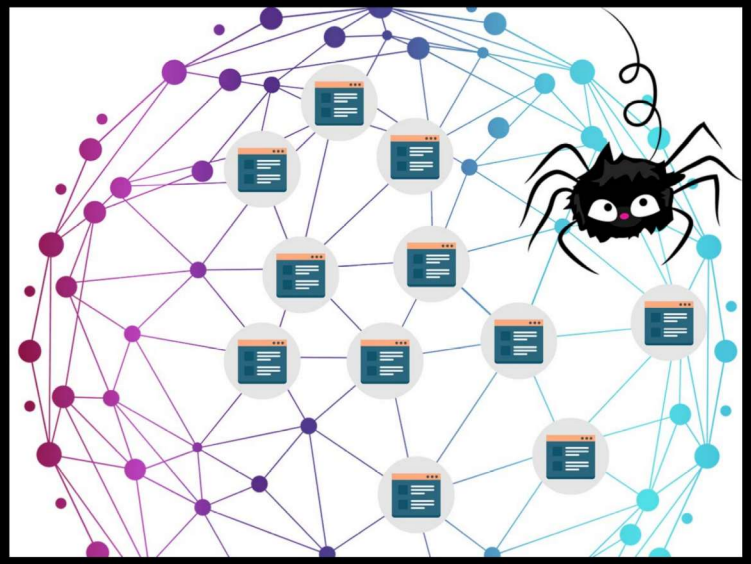
Sinte

Topic identification - 1

- **Request**: To automatically tag thousands of articles with the specific topics treated in the texts, without any deterministic dataset and using whichever taxonomy
- **Approach**: Use a ChatGPT approach, the engine browse the web learning how to identify specific and specialistic topics.
- **Results**: Articles and websites tagged without any human effort and no need to use old “linguistic” approach (**ten times less expense**).

Sinte

Topic identification - 2



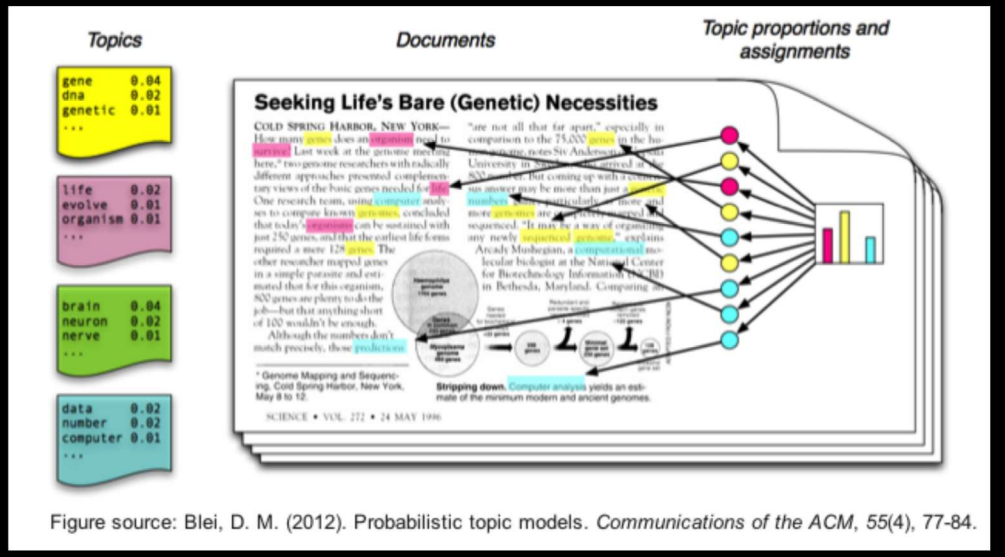


Figure source: Blei, D. M. (2012). Probabilistic topic models. *Communications of the ACM*, *55*(4), 77-84.

Sinte

User profiling

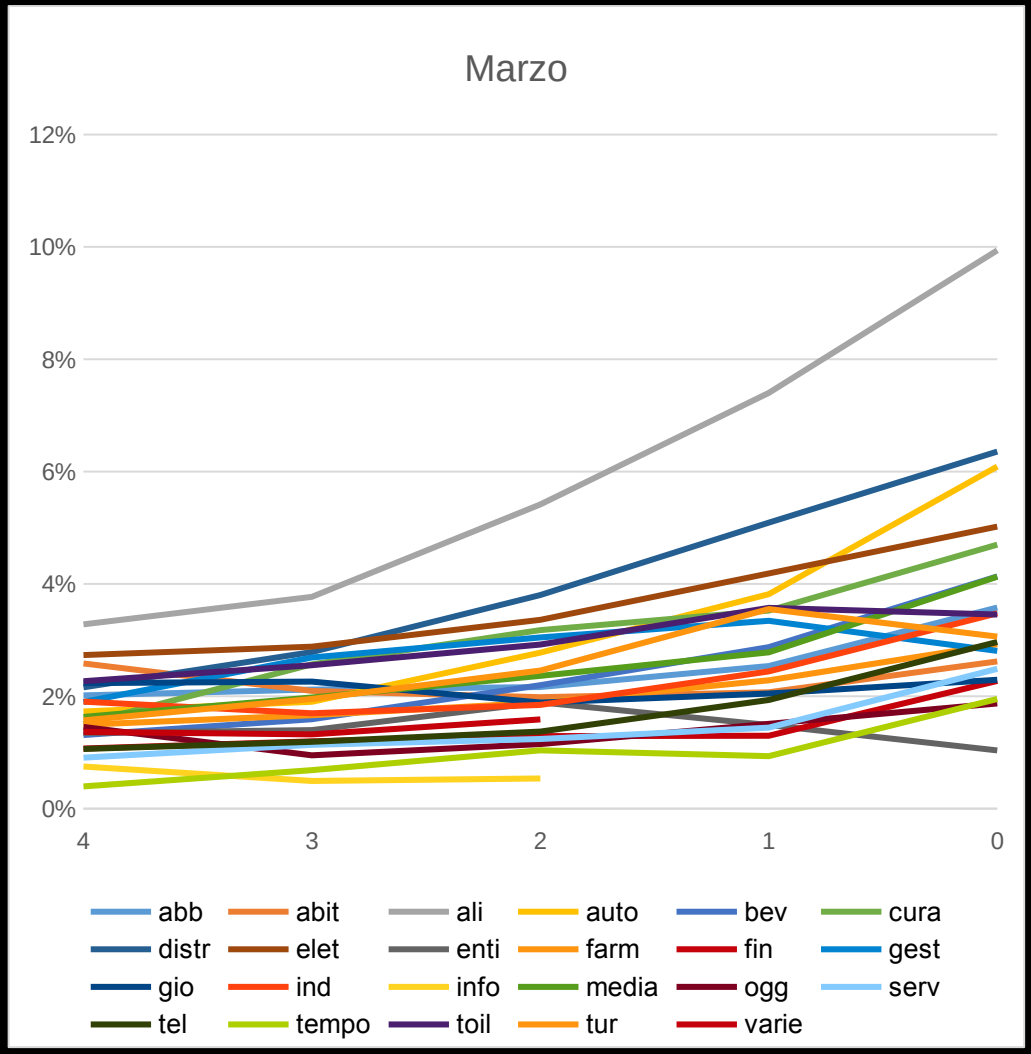
Sinte

IAB categories click optimisation - 1

- **Request**: increase the click rate on banners on top of the Google optimisation, having information of just 30% of traffic of campaigns, dividing users in 5 clusters for each of the first level of IAB categorization (customer is not able to perform a one-to-one delivery)
- **Approach**: create high significant profile of each cookie using semantic and classifications and create sophisticate models to predict the click rate of each user for each category.
- **Results**: Increase in quite all categories, and in the most focused one the click rate is **300%** the former one.

Sinte

IAB categories click optimisation - 2



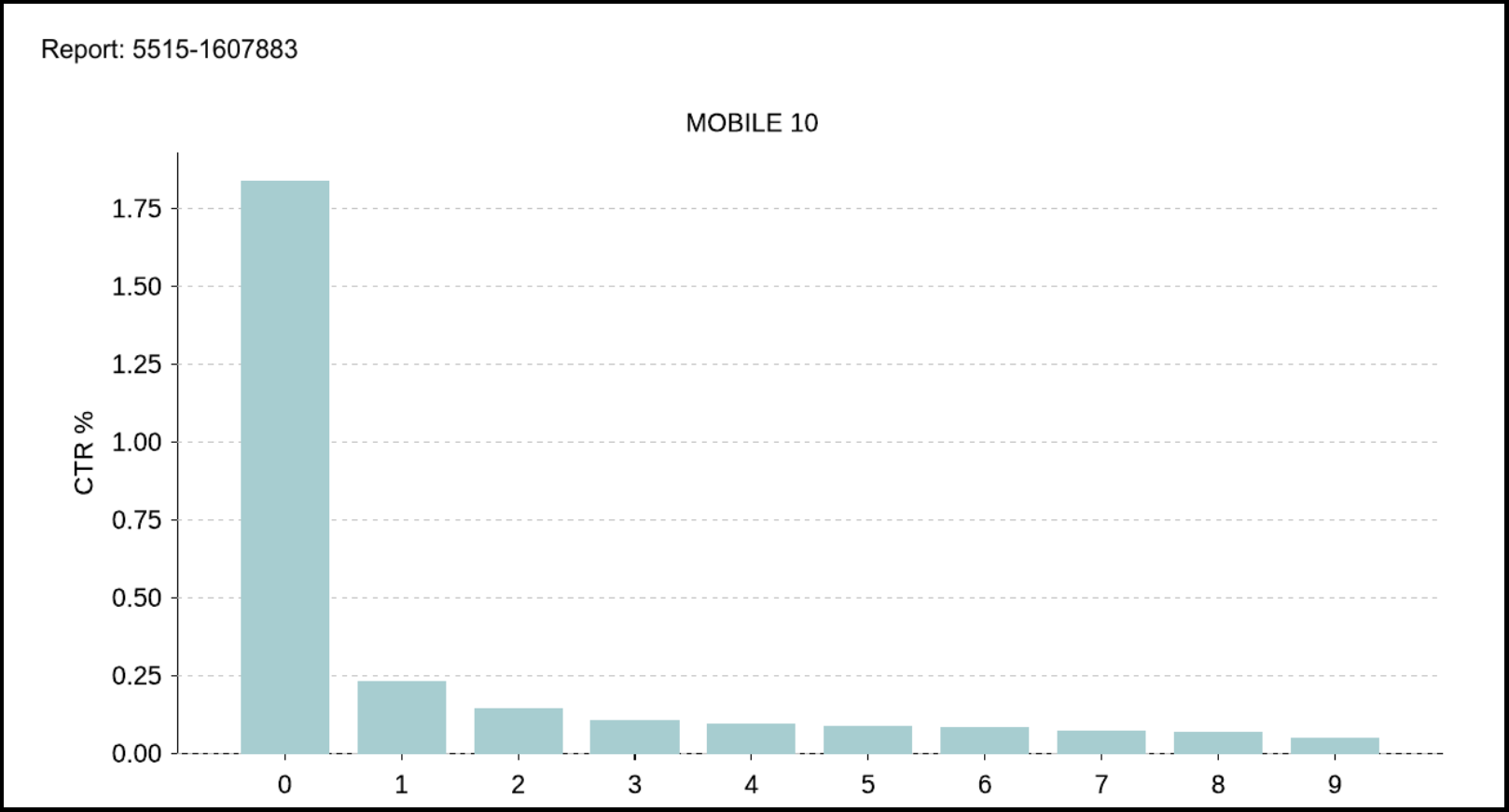
Sinte

Campaign click optimisation - 1

- **Request**: increase the click rate on banners for their campaign.
- **Approach**: create high significant profile of each cookie using semantic and classifications and create sophisticate models to predict the click rate of each user for each category.
- **Results**: The result of our cookies are between **300% and 700%** our competitor’s results.

Sinte

Campaign click optimisation - 2



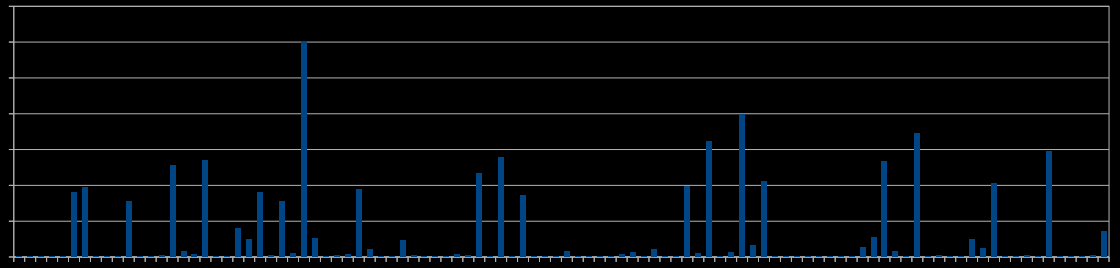
Sinte

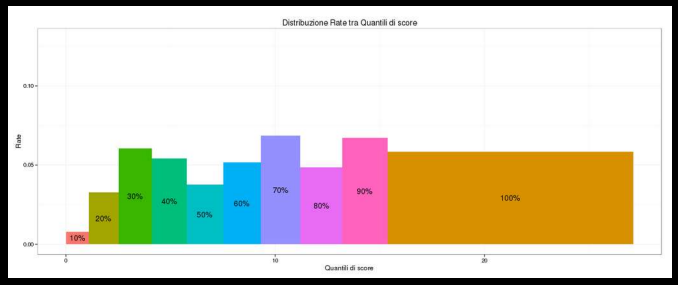
Cookies profiling - 1

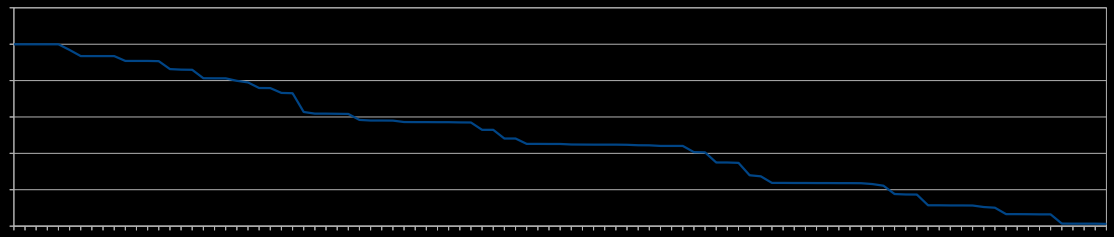
- **Request**: Identify interests, propensity, changes for anonymous and logged users of a website
- **Approach**: use cookies profile created from the navigation history to identify his interests (all life, medium period and recent) to help companies to propose the needed things in the right moment.
- **Results**: Capability to intercept **continuous needs** (a golf player or philatelic), **changes** in life (just married or the birth of a son) and **immediate needs** (looking for a car or for new insurance).

Sinte

Cookies profiling - 2







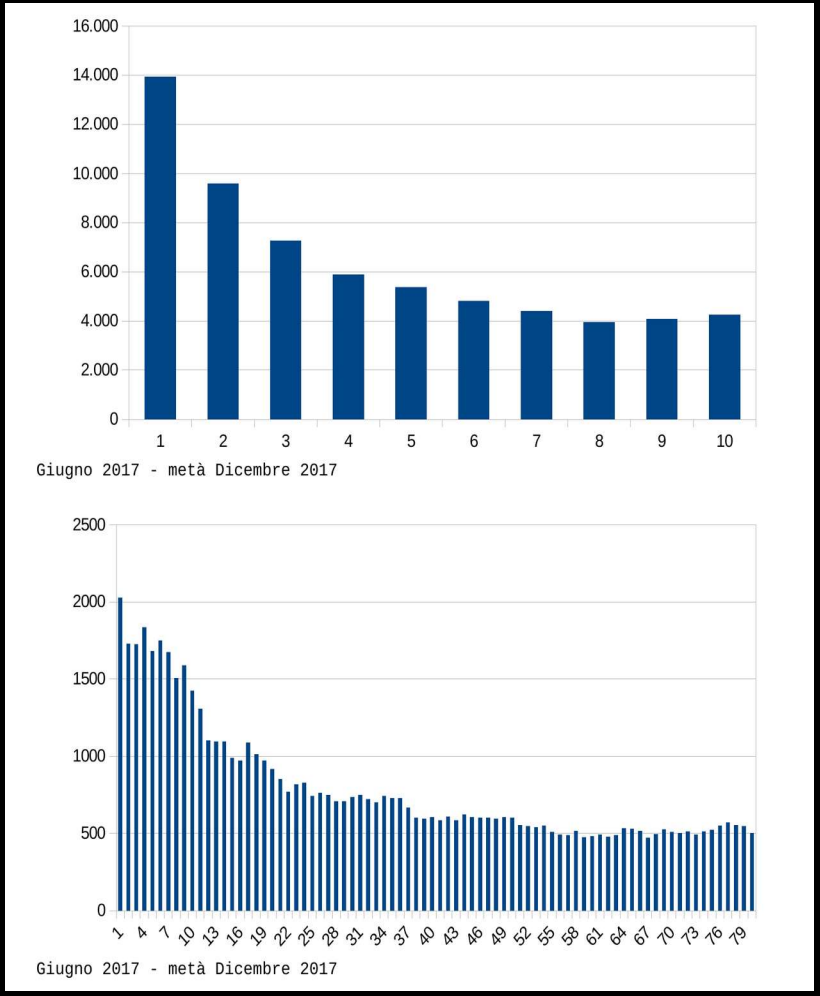
Sinte

Antichurn models - 1

- **Request**: predict the churn probability of each customer just according to their browsing behaviour outside our clients's website (wherever are its banners). No info on their socio-demo, their contract. In this very first step, no distinction between recent and distant browsing behaviour.
- **Approach**: A machine learning system feeded with a very smart profiling of users according to the needs.
- **Results**: the last quantile has **400%** the users of the first one. Now it is ready to regulary enrich the CRM system with new KPI.

Sinte

Antichurn models - 2



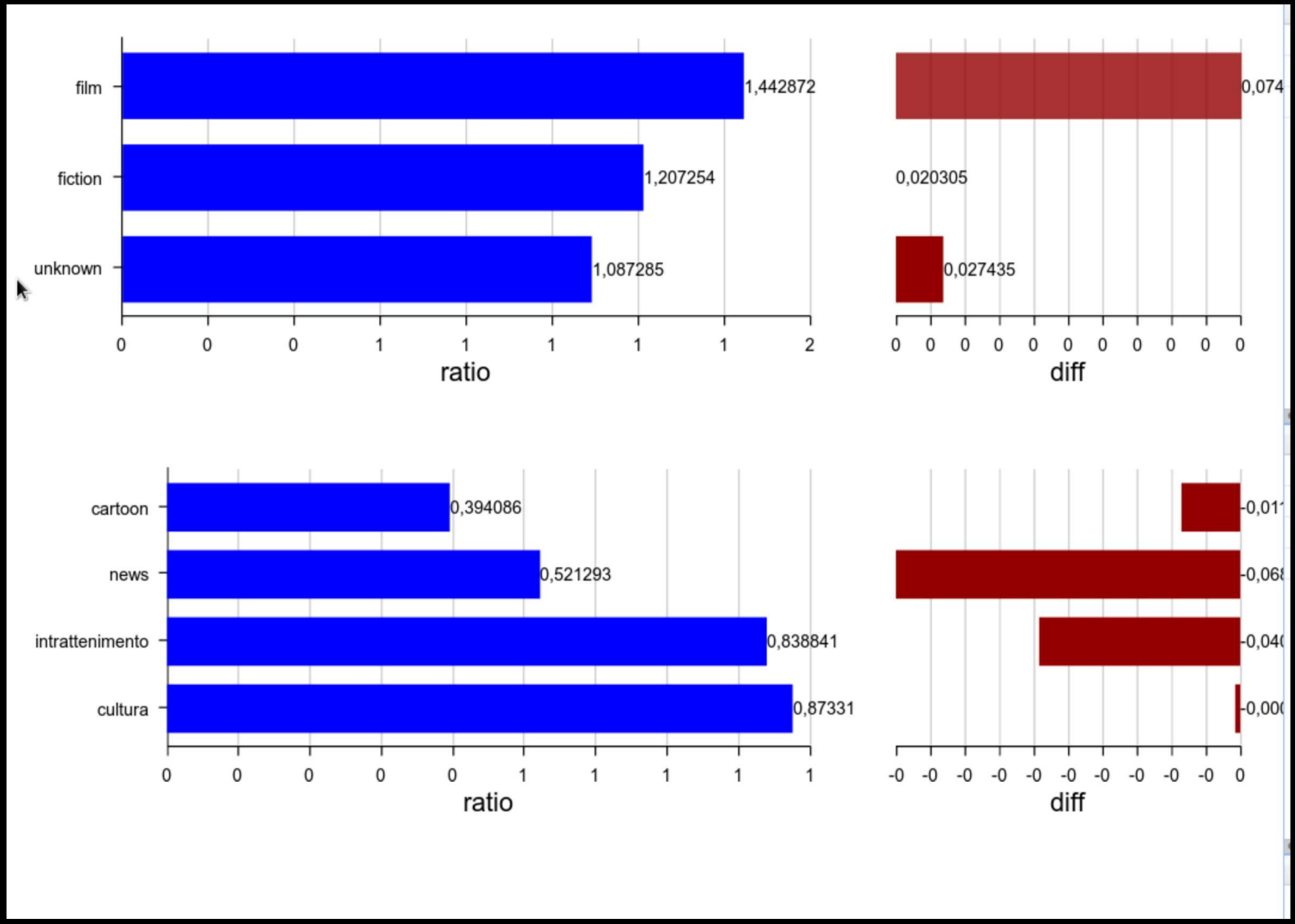
Sinte

Customers clustering - 1

- **Request**: Identify the main clusters in the customer base using their behaviour on TV
- **Approach**: Create profile of hundreds of features for each customer and after a deep analysis of the correlations we use a centroid-based clustering.
- **Result**: We identified a easy process that allows to decide how many clusters and which features to use and it creates best clusters, gives different intelligent measures to evalute the result and allows to navigate each cluster showing how it differs in the other non-selected features.

Sinte

Customers clustering - 2



Sinte

Customers identification - 1

- **Request**: Identify the profiles of the user in front of each TV using the infos of the history of programs viewed.
- **Approach**: Create a smart algorithm to create a proxy of the probability of each segment for each views, an intelligent algorithm to estimate the probability of each segment for each television and identify a dynamic threshold to assign a target to a television
- **Result**: An engine capable to assign the correct number of each segment in the audience (**error from 0% to 3%**).

Sinte

Customers identification - 2

Target	TPR Tr	FPR Fa	dist	Precision -	Recall -	Accuracy -	Delta A
under_14	53%	17%	0,25	53%	53%	75%	0%
donne_over_65	53%	14%	0,27	53%	53%	78%	0%
uomini_35_54	59%	32%	0,19	59%	59%	64%	1%
donne_15_34	42%	19%	0,16	41%	42%	72%	2%
uomini_over_65	64%	15%	0,34	62%	64%	79%	2%
donne_15_34	41%	18%	0,17	43%	41%	72%	3%
donne_55_64	43%	17%	0,18	44%	43%	73%	3%
uomini_15_34	42%	20%	0,16	44%	42%	70%	3%
donne_35_54	60%	38%	0,16	58%	60%	61%	3%

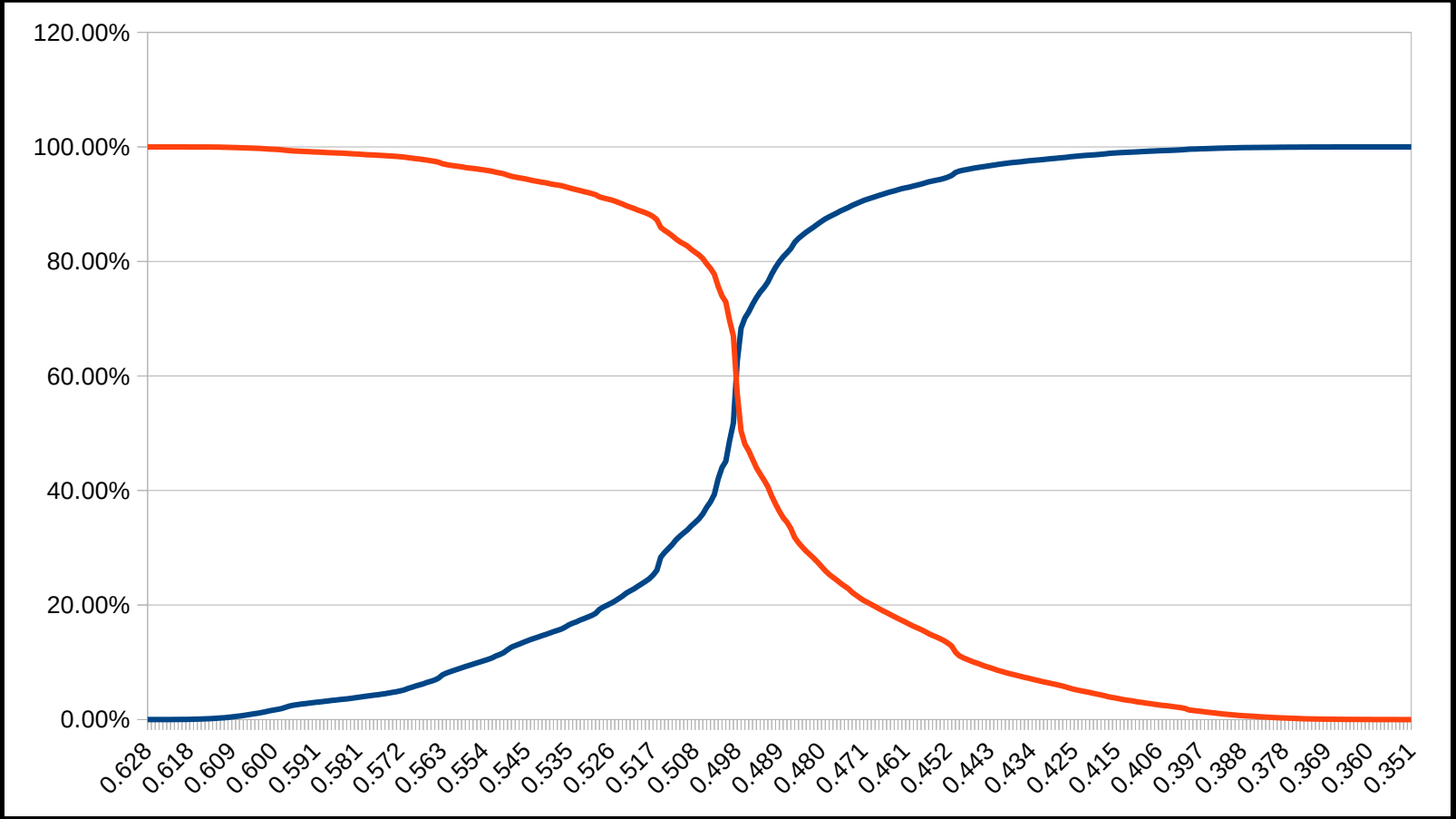
Sinte

Socio-demo segmentation - 1

- **Request**: Identify gender and age of anonymous cookies
- **Approach**: Use the deterministic data of customers to create a powerful model that is able to determine the age and gender of anonymous prospects according to their navigation profile.
- **First result**: With the very first model we got very good results: dividing all the cookies in males and females, in every group **there are double the number of the other gender**.

Sinte

Socio-demo segmentation - 2



Sinte

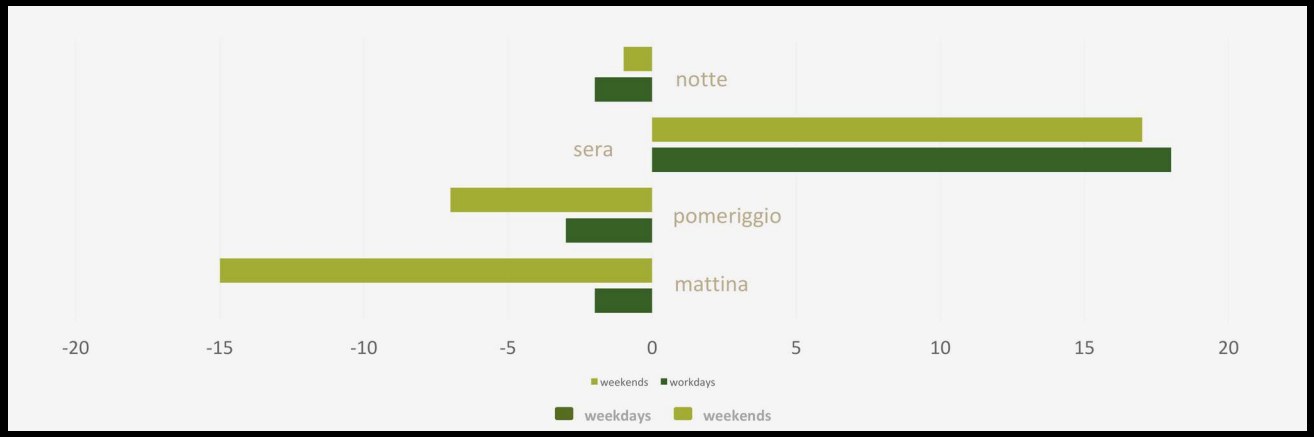
Market Analysis from cookies - 1

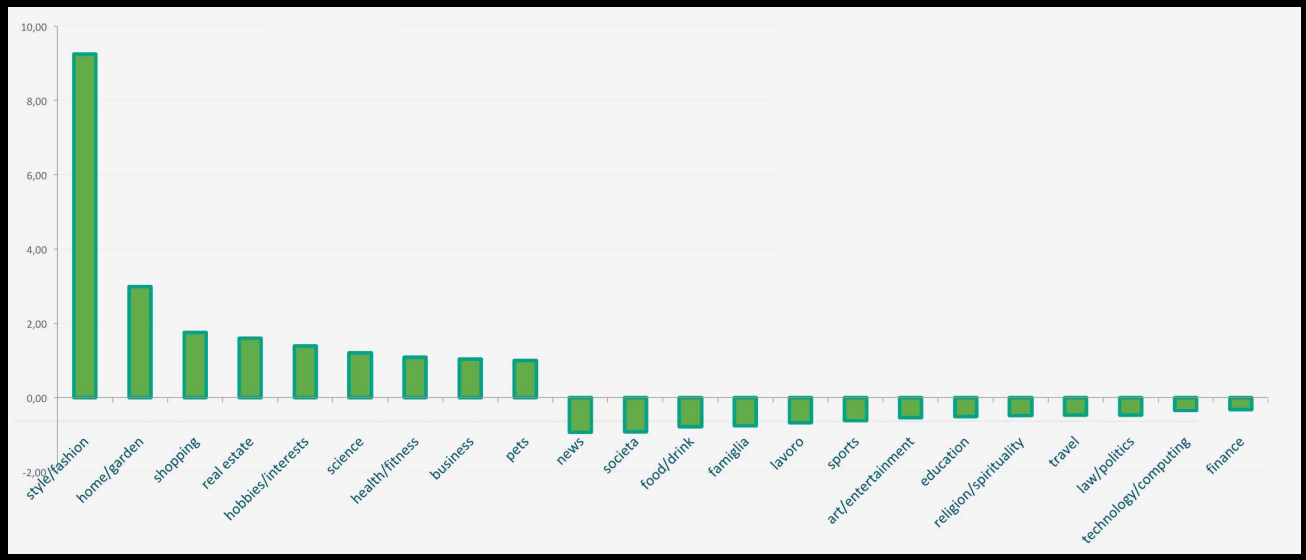
- **Request**: Use cookies' anonymous and aggregated data to create valuable information
- **Approach**: Use the big amount of information collected by cookie analysis to identify how particular target (ex: people interested in cosmetics) differs from the mean of population,
- **First result**: With a very smart approach we can get a map to show **how to act for every kind of target**.

Sinte

Market Analysis from cookies -2

Cosmetics





Sinte

Recommendation

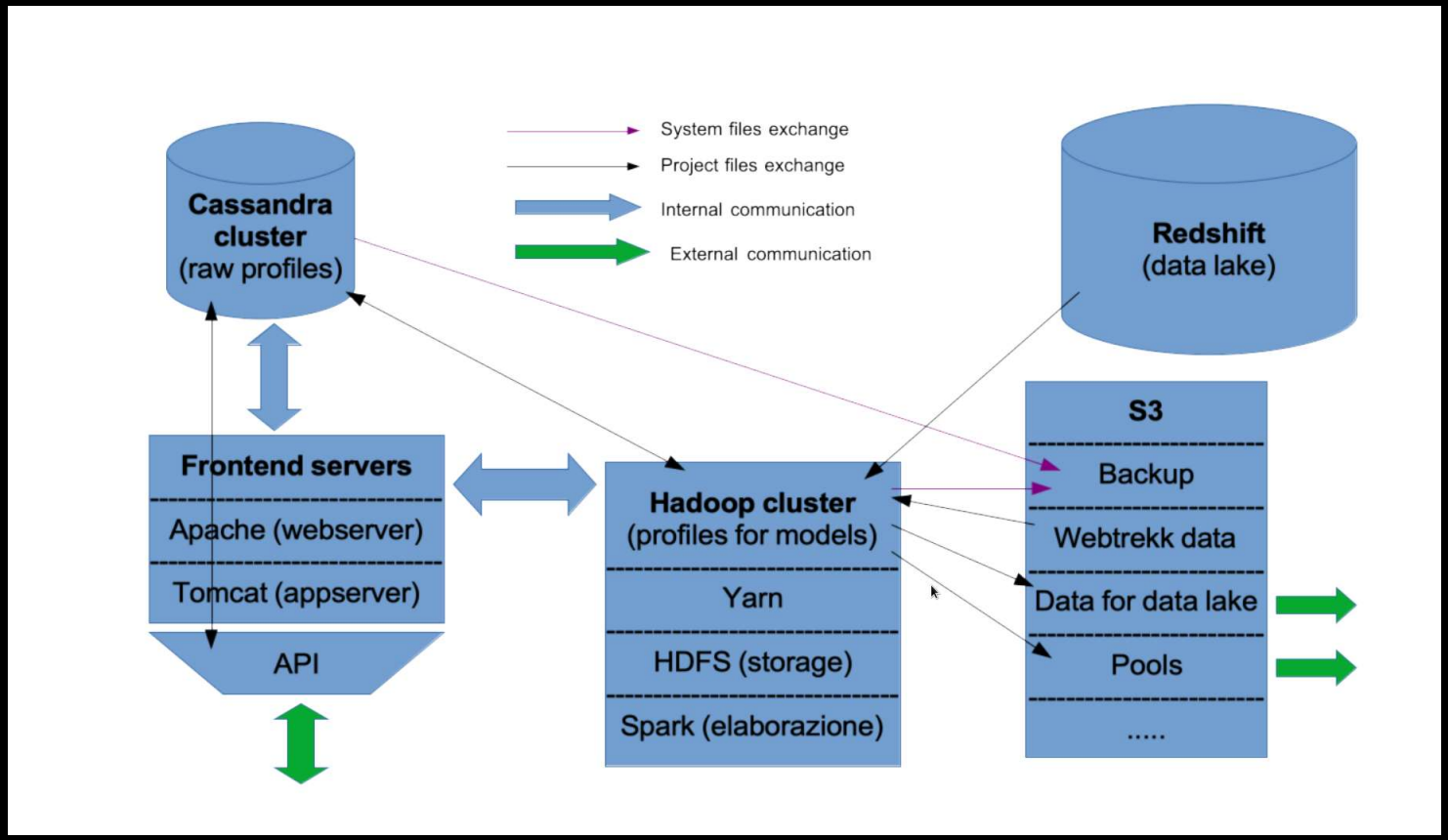
Sinte

Marketing recommendation - 1

- **Request**: Create a propensity model to help Marketing to identify the best target of a campaign.
- **Approach**: We used all data gathered from all the properties of our client to create a profile of thousands of features.
- **Results**: A solution integrated in the marketing UI to help Marketing suggesting solution but also capable to deliver the best optimisation without any human decision.

Sinte

Marketing recommendation - 2



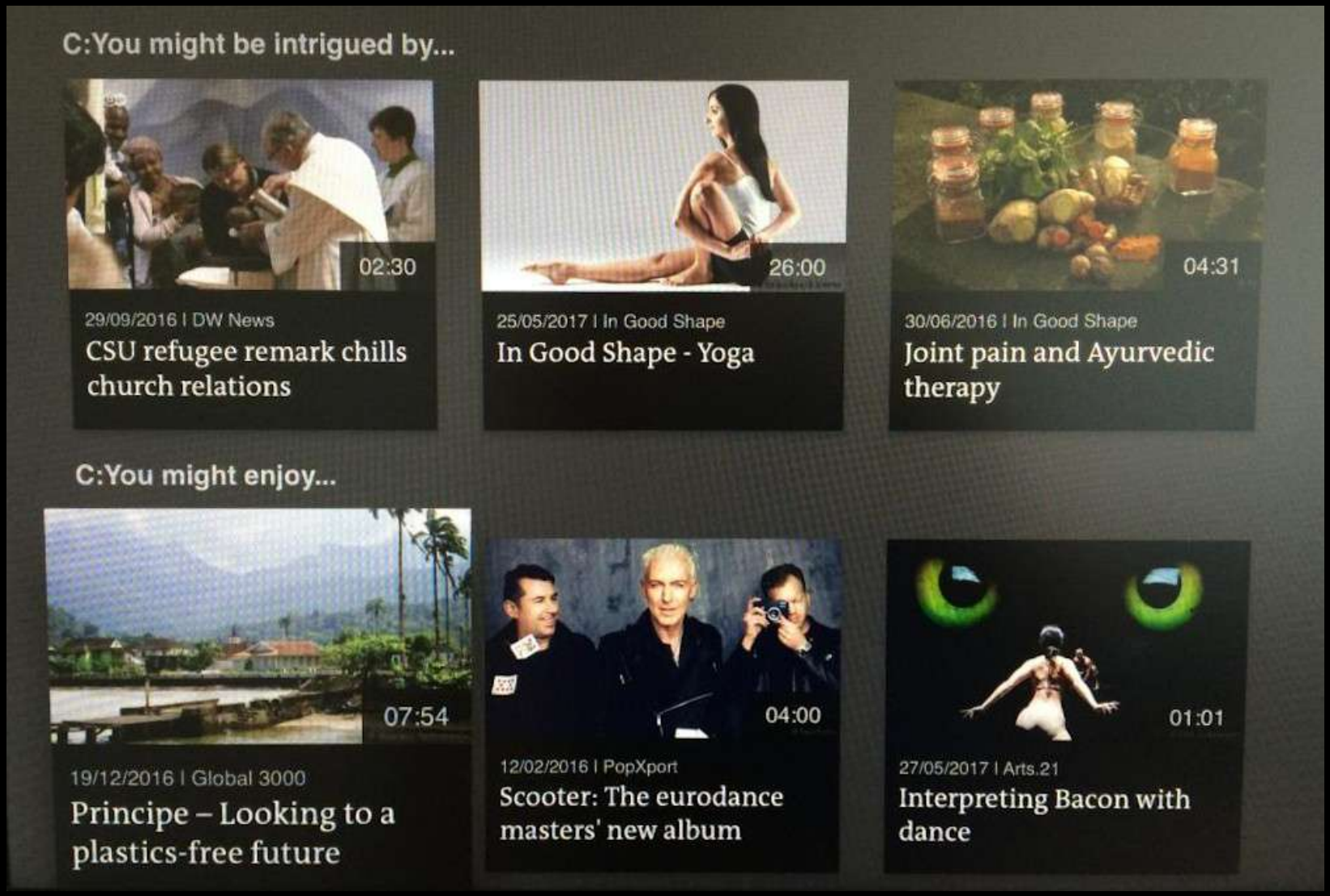
Sinte

Editorial recommendation - 1

- **Request**: Create a propensity model to populate a box of “chosen for you”.
- **Approach**: We use three engines. A themes collector which gathers tendencies and trends from the web, e semantic engine which define very precise profile of contents and a statistical engine which provide propensity models.
- **Results**: **Over 2 times better then former engine**

Sinte

Editorial recommendation - 2



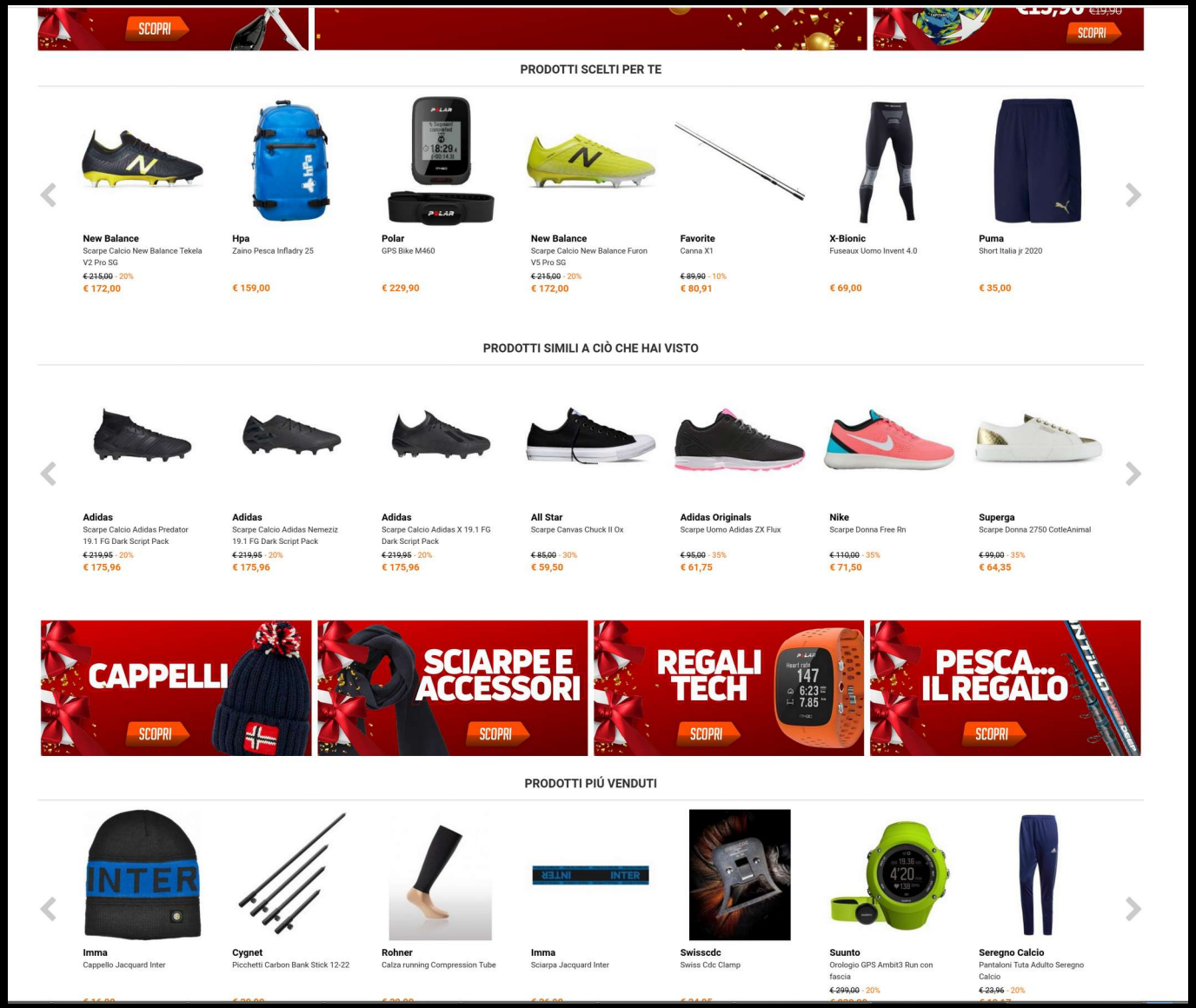
Sinte

E-commerce recommendation - 1

- **Request**: Create different engines to propose the best set of products for each single user in different part of the site:
  - home page “most suitable for you”, “similar to previuosly viewed products”, “offers for you”, “most sold”
  - product page: “alternatives” and “to buy together”
- **Approach**: a mix of statistical models and very customized algorithm with a deep knowledge of e-commerce logics.
- **Results**: **Over 6 times better than former engine.**

Sinte

E-commerce recommendation - 2



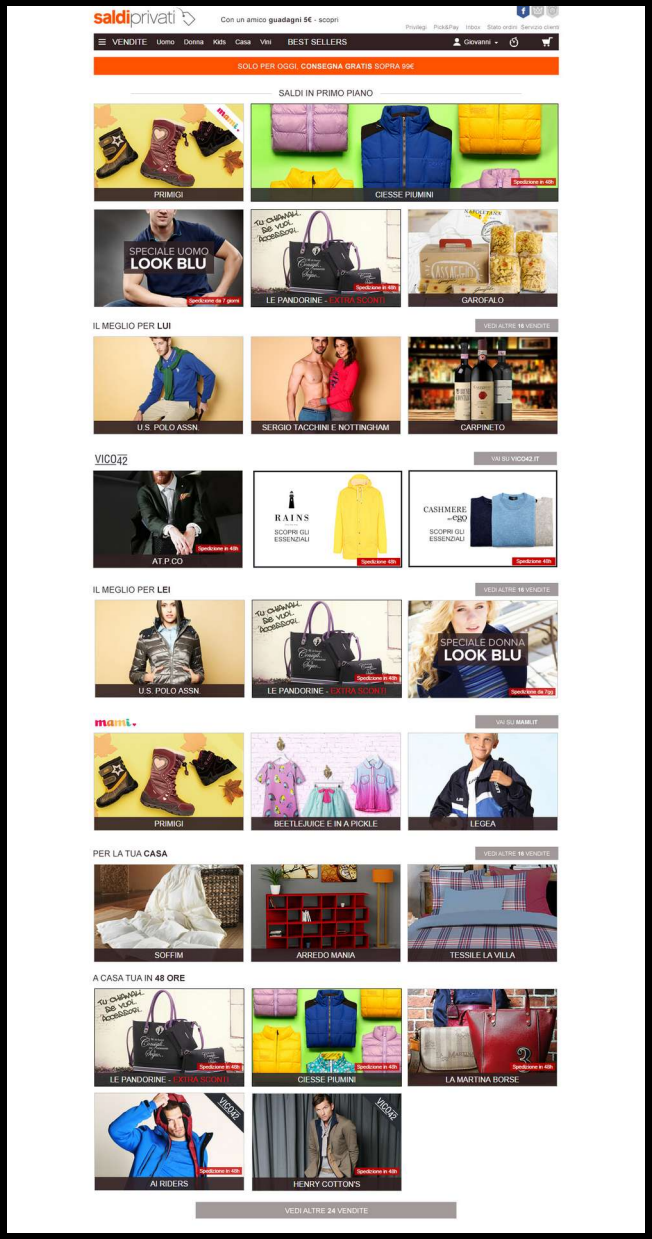
Sinte

Home page sorting - 1

- **Request**: Create a solution to differentiate the order of offers in the homepage to increase sells. For technological limits of the customer we cannot suggest products and we cannot create a real time approach one-to-one, but we have to work to create the sorting every night for the day after clustering users in 35 clusters.
- **Approach**: Using an intelligent mix of ordinal variables models and cardinal variables models we create a solution in machine learning which will increase performances.
- **Results**: The result is **+8%** in incomes in the first month.

Sinte

Home page sorting - 2



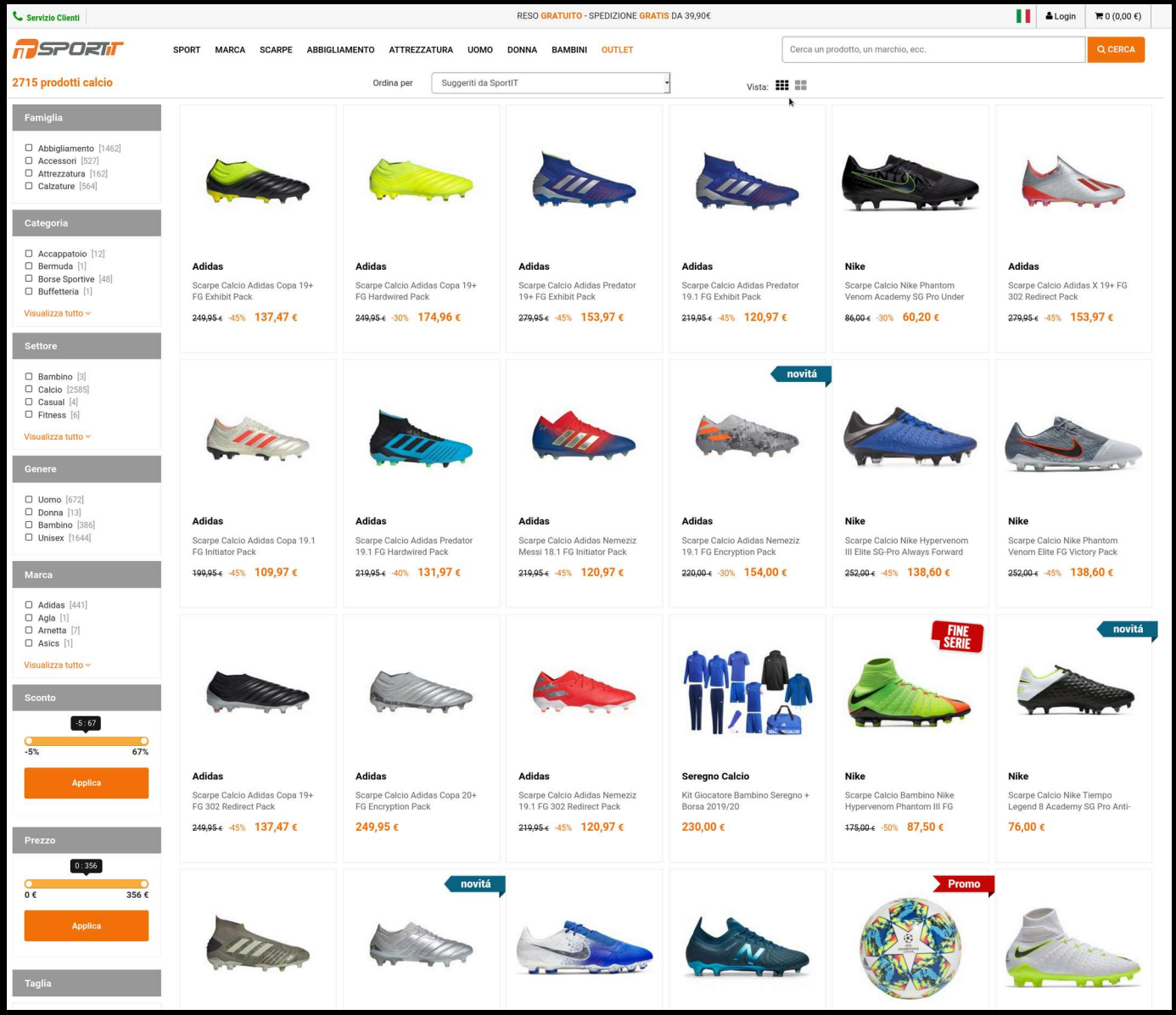
Sinte

Internal search optimisation - 1

- **Request**: A powerful search engine which could give in real-time the results in order of matching (using also similarity algorithms) and all possible filters at the same time.
- **Approach**: An advanced mix of full text and structured data search solution together with high optimisation of indexes and auto-learning models based on recommendation engine.
- **Results**: **+22% page viewed** per session

Sinte

Internal search optimisation - 2



Sinte

Visual information

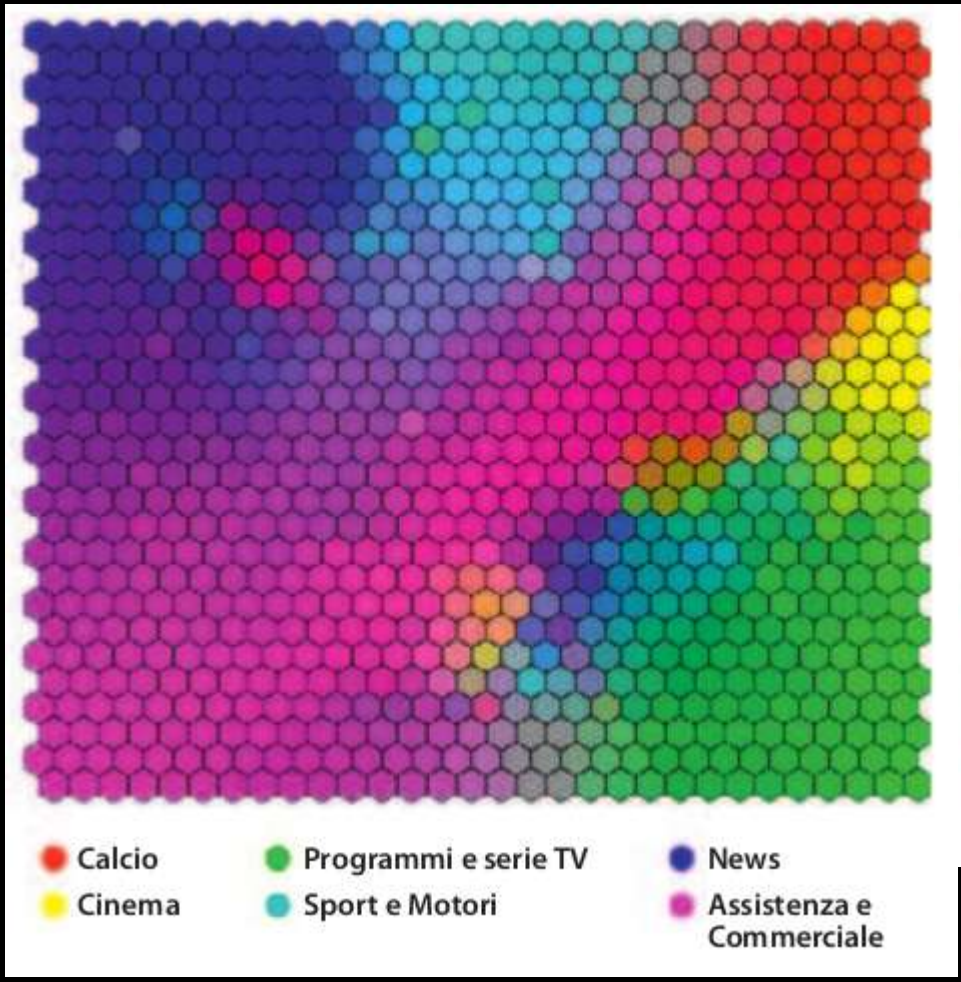
Sinte

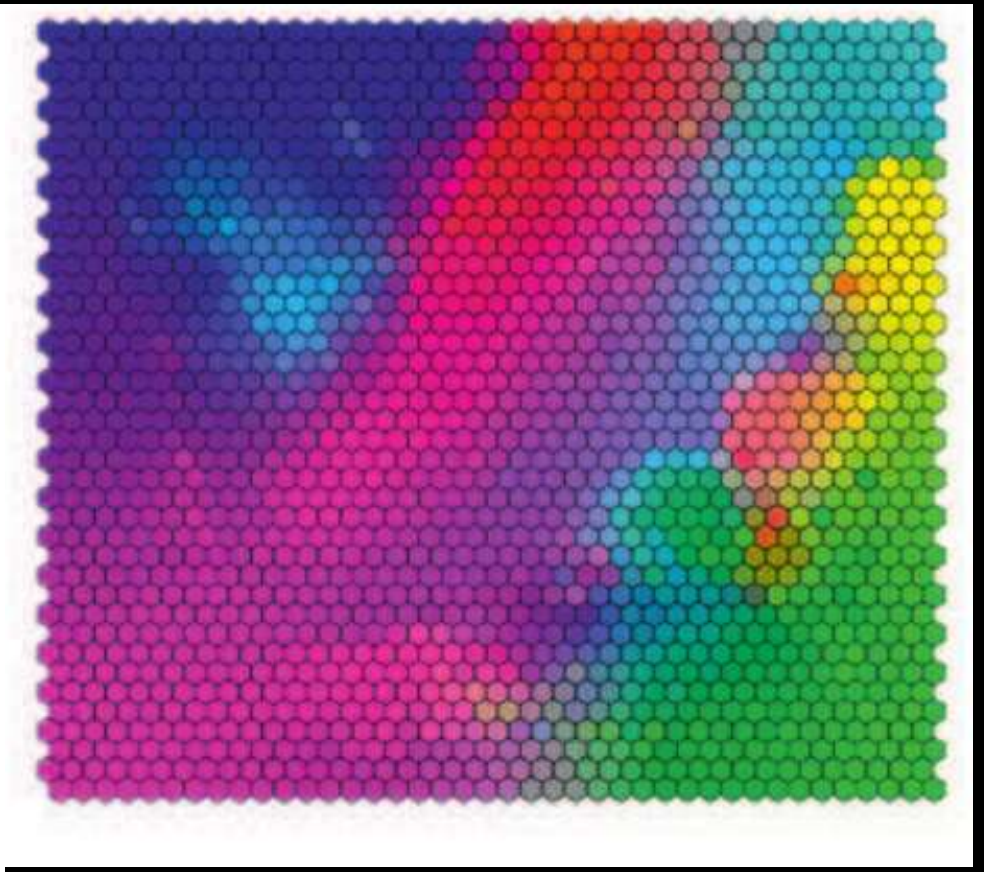
Web Analytics - 1

- **Request**: To find a new way to represent the web logs of anonymous users on their site(s).
- **Approach**: Using our customisation of Kohonen maps (neural maps) we realise a innovative representation.
- **Results**: **New solution** which was also published in a specialised magazine (DATAvalue)

Sinte

Web Analytics - 2





Sinte

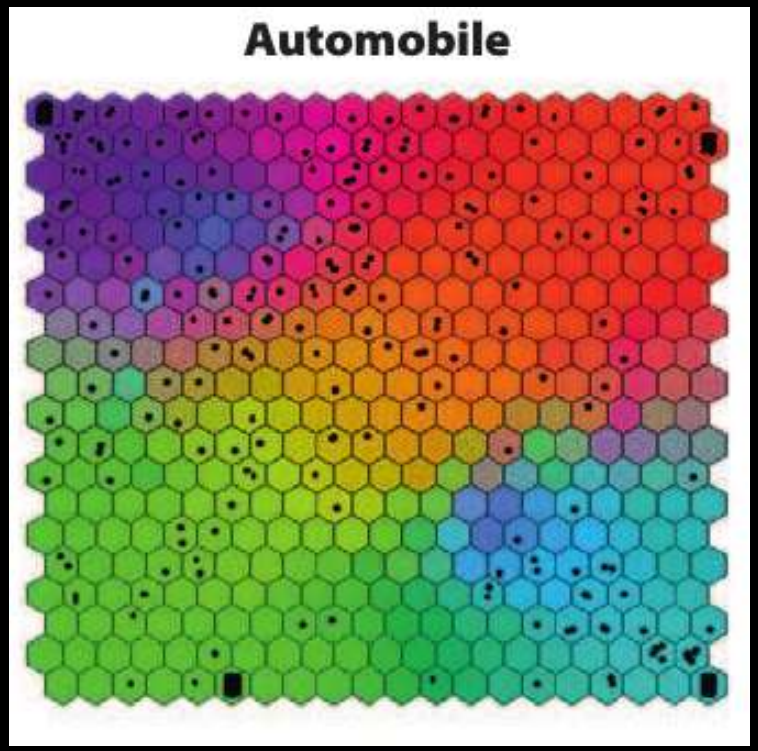
Marketing map - 1

- **Request**: To find a way to use Nielsen's Data of investment in advertising of Italian companies.
- **Approach**: Using our customisation of Kohonen maps (neural maps) we realise a meaningful representation of a multidimensional environment in a human readable two dimensional map.
- **Results**: **Innovative solution** which delivers regularly the maps used constantly by the management **to decide strategies**.

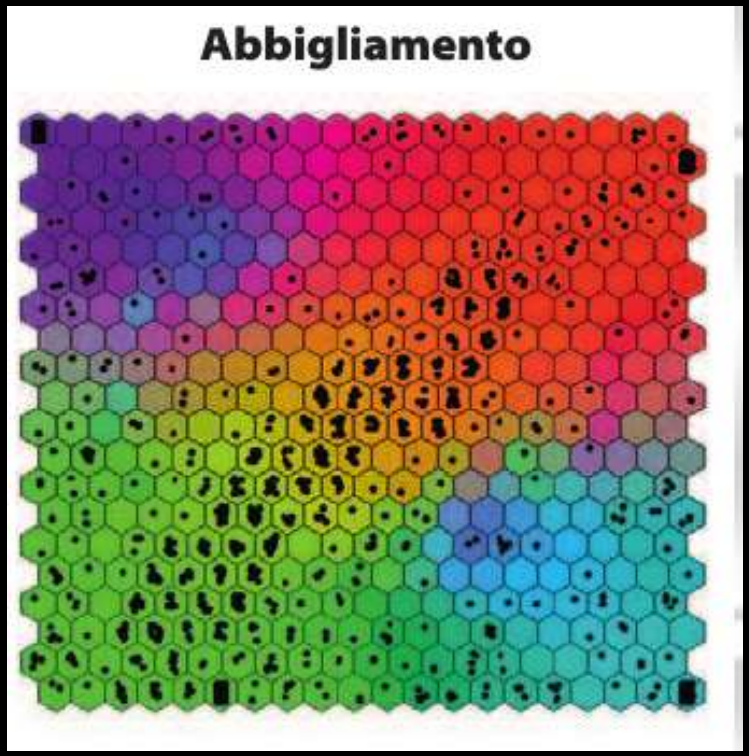
Sinte

Marketing map - 2

Automotive



Fashion



Magazines **Newspapers** **Out of home** **Internet**

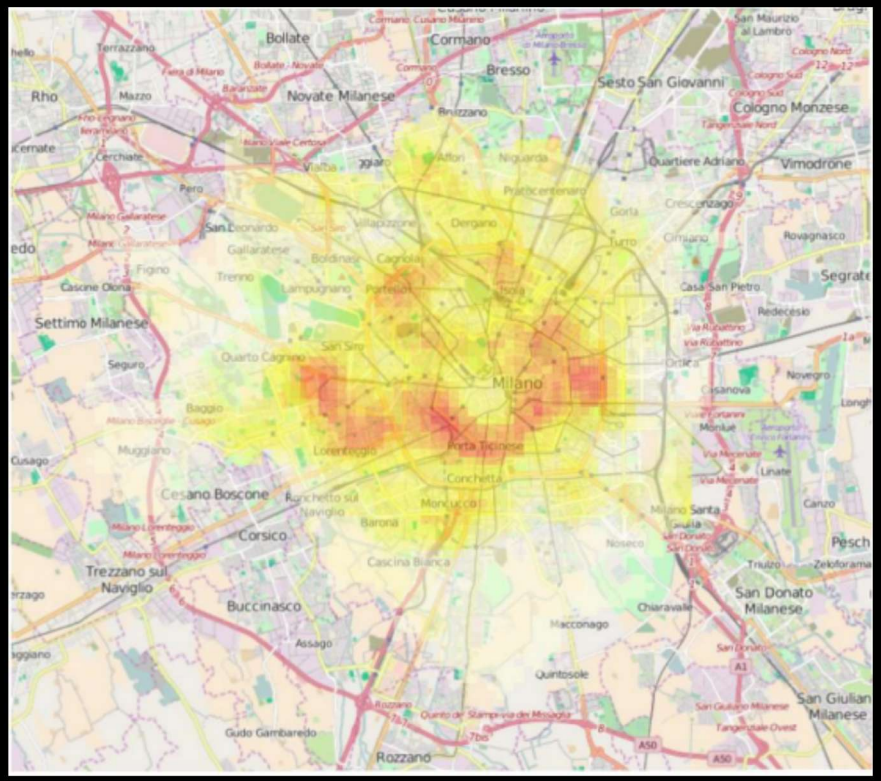
Sinte

Touristic/houshold maps - 1

- **Request**: Visualizing the «territorial vocation» of Milan
- **Approach**: Use open data to create a multilayer visualisation map
- **Result**: An innovative tool able to “read” the territory in a new way

Sinte

Touristic/houshold maps - 2



Sinte

Time series

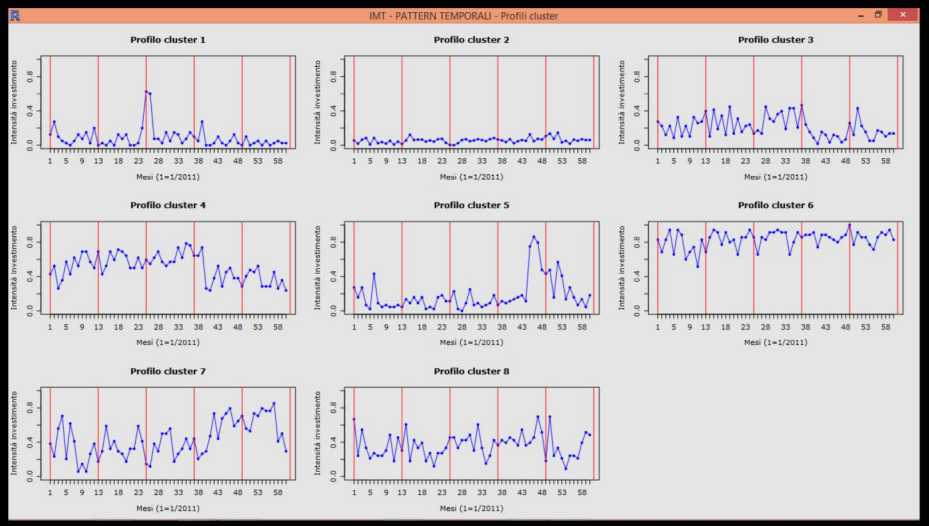
Sinte

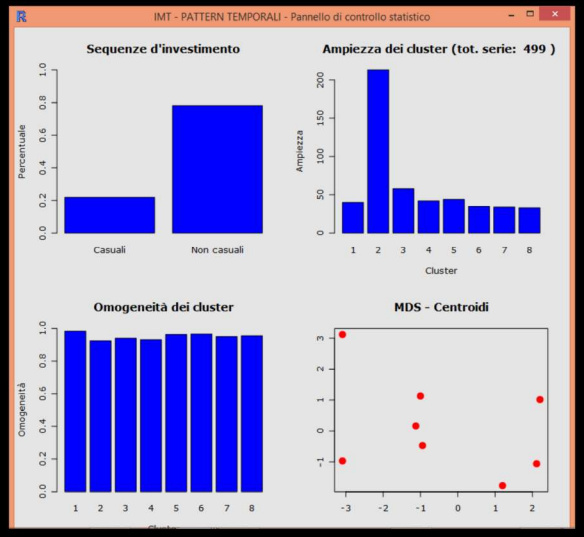
Temporal investment segmentation - 1

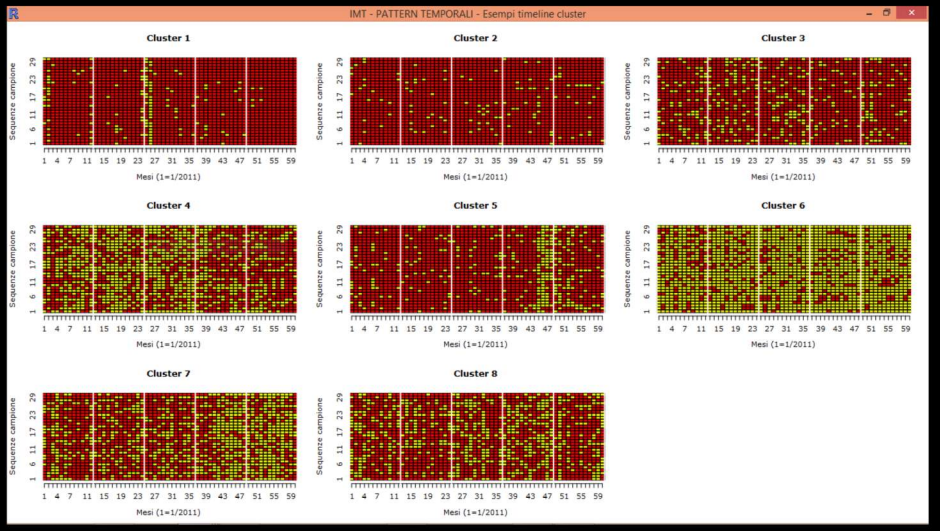
- **Request**: to identify temporal investment patterns, to support timely selling actions.
- **Approach**: a tool implementing statistical tests and clustering algorithms, to cluster investment behaviors and visualize them.
- **Result**: This **tool is now part of an IMT** (Informational Marketing Tools)

Sinte

Temporal investment segmentation - 2







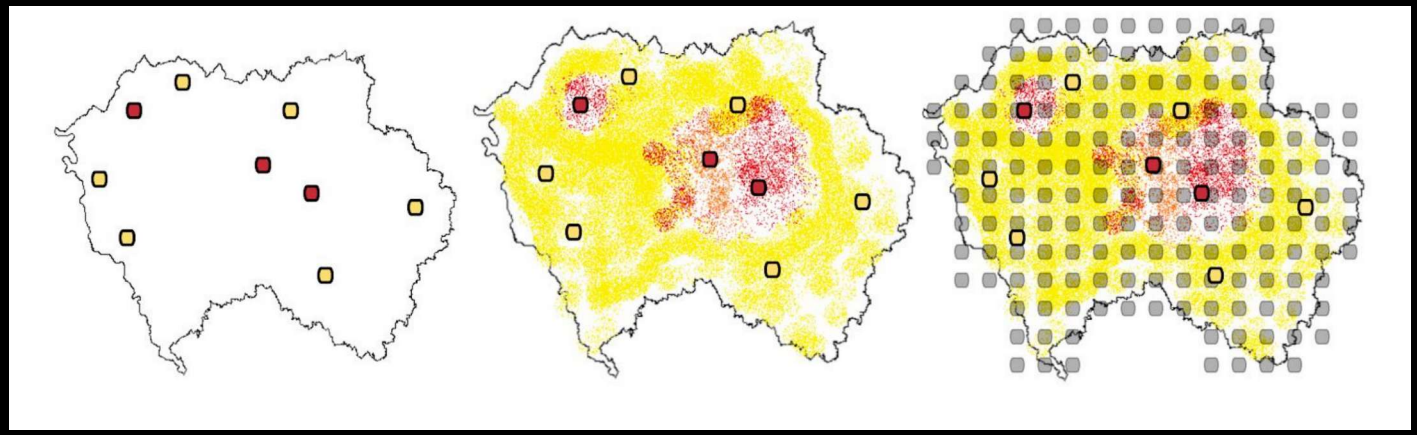
Sinte

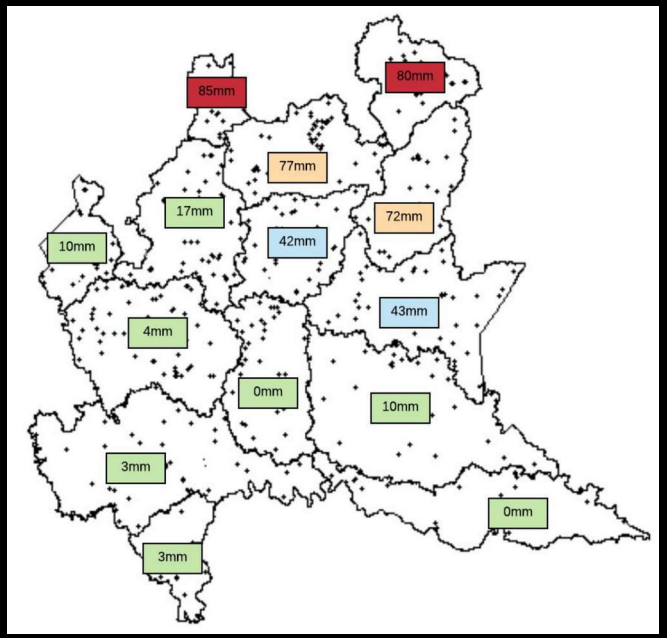
Meteo forecasting - 1

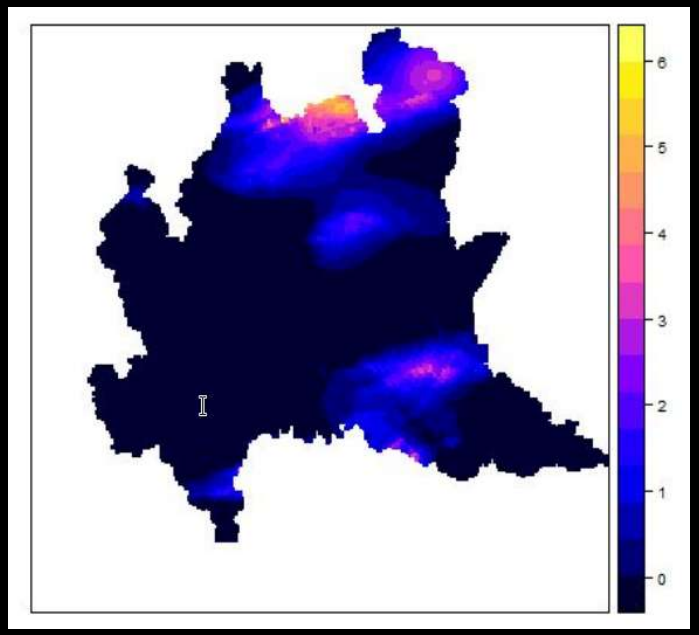
- **Request**: To get a reliable forecast of meteo big events that helps authorities to be prepare to face natural disasters
- **Approach**: Use all the available forecasts from different services to create an intelligent algorithm able to provide a robust forecast.
- **Result**: An important solution that gives an index of potential alert for each risk on every geographical area.

Sinte

Meteo forecasting - 2







Sinte

Restaurants forecasting - 1

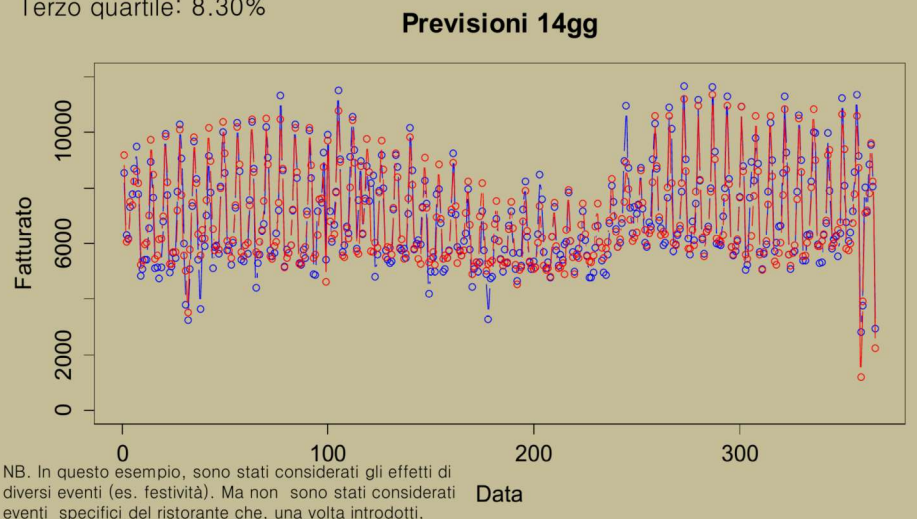
- **Request**: A system able to continuously predict the revenues in the next two weeks
- **Approach**: Using advanced time series models and giving a lot of external features (holidays, weather, sales periods, Lent, Ramadan, soccer matches ...) we realize a solution able to give trend and forecasting of the revenues per each days in the future
- **Results**: forecast the revenues of each restaurant with **median absolute error of 4.19%** in the last (the 14th) day in the future.

Sinte

Restaurants forecasting - 2

Previsioni 2012 a 14 giorni

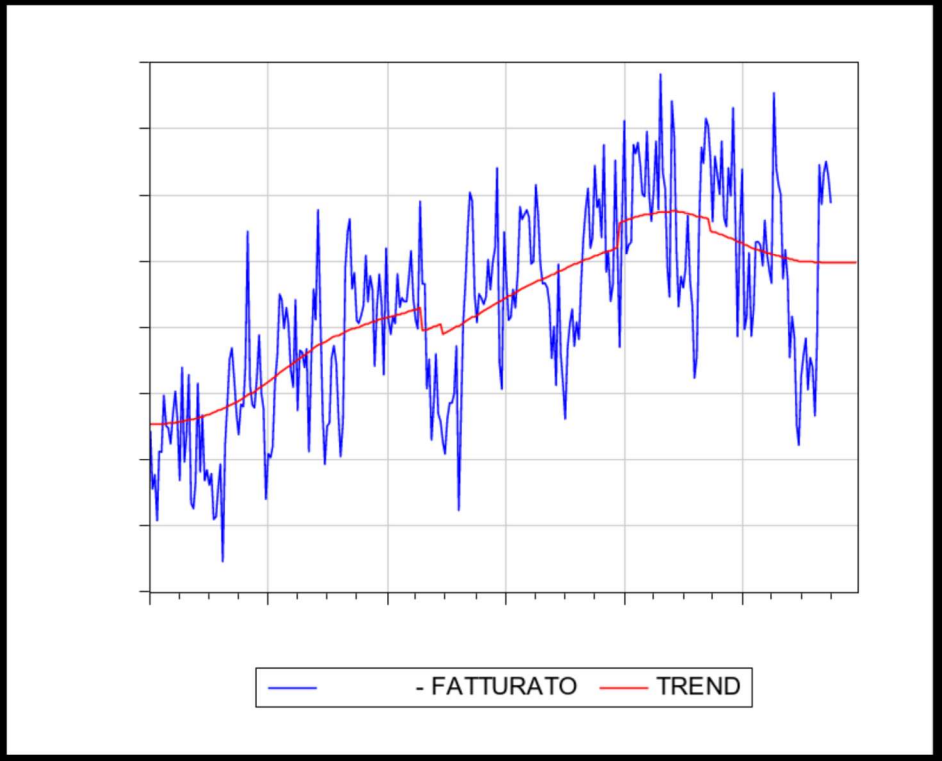
Errore medio assoluto: 6.57%
Errore mediano assoluto: 4.19%
Terzo quartile: 8.30%



NB. In questo esempio, sono stati considerati gli effetti di diversi eventi (es. festività). Ma non sono stati considerati eventi specifici del ristorante che, una volta introdotti, potranno ulteriormente migliorare le previsioni.

SmartStat

Data science for governance, innovation and research



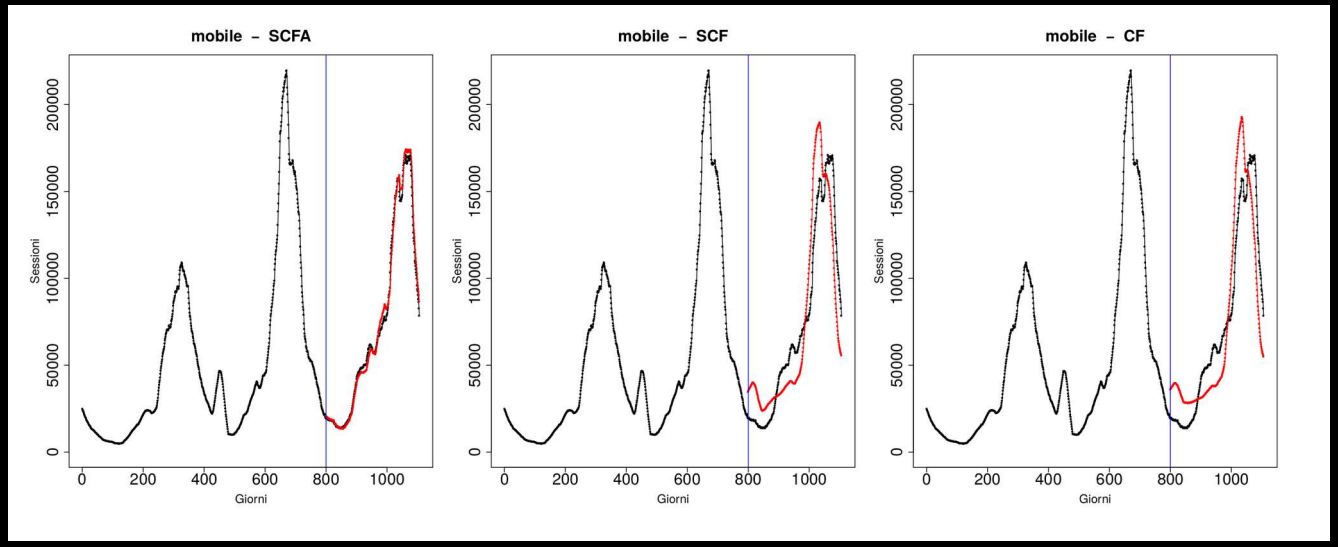
Sinte

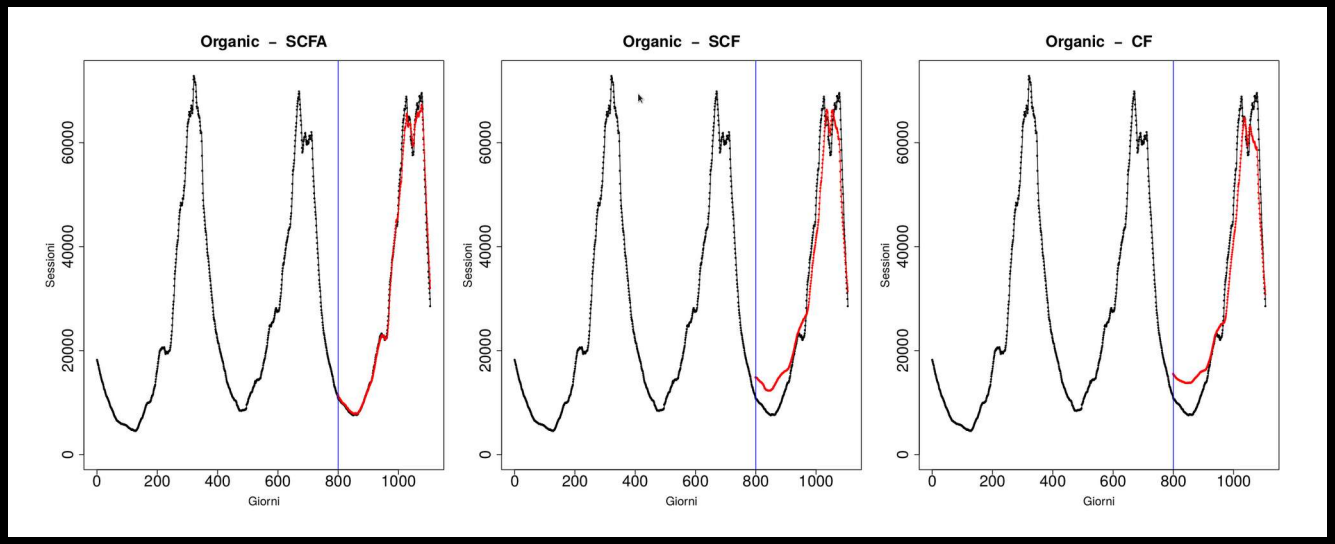
E-commerce forecasting - 1

- **Request**: A system able to predict sell in the next months divided by type of product for each brand's shop.
- **Approach**: Embedding our client's know-how and external events in time series models we realize a solution able to give trend and forecasting of the sells.
- **Results**: Trhee customizable engines (from the simplest to the more complex) able to forecast the revenues of each brand just changing the data feed.

Sinte

E-commerce forecasting - 2





Regressors:
S=Sales
C=Calendar
F=Festivity
A=Autoregression

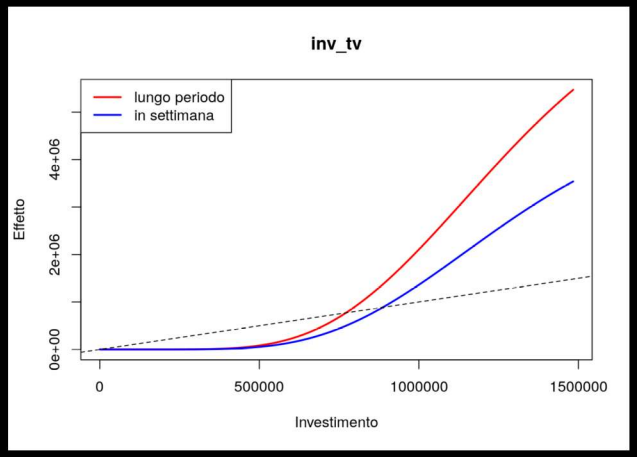
Sinte

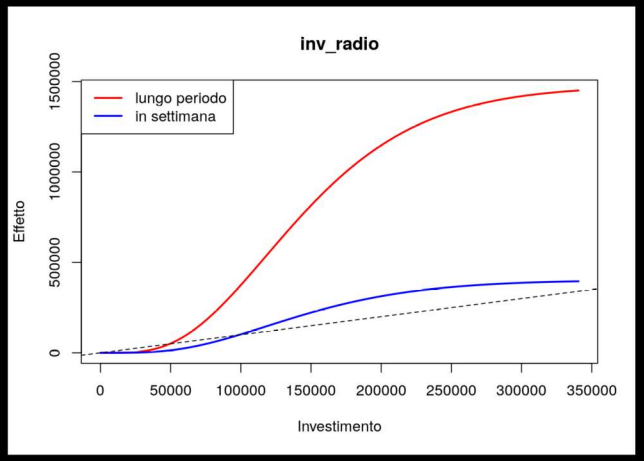
Support advertising investment - 1

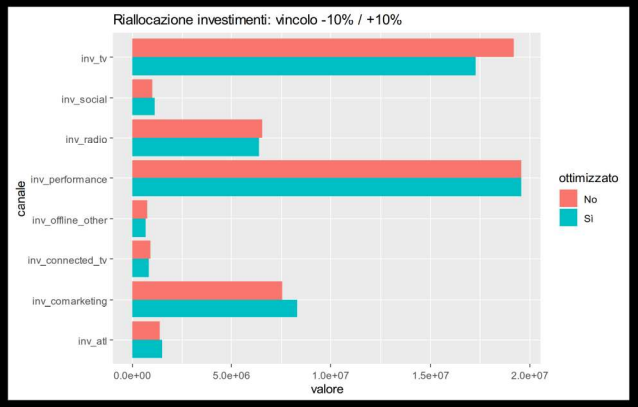
- **Request**: A solution that take in input the budget and the acceptable ranges of quotas for each media and suggest the best mix of investment in advertisting to optimize revenues.
- **Approach**: A very advanced mix of time series methodologies studies data from the past and simulate all possible scenarios to calculate the best answer.
- **Results**: A web application where continuously feeded from the data of investment and economic results and able to receive the question of the users and simulate the future according to the requests. Moreover it can find autonomously the the best possible investment for each media (TV, Web, OOH…) **reducing investment and increasing revenues**

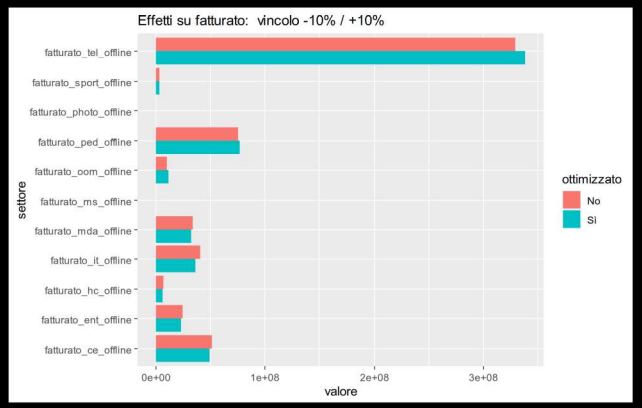
Sinte

Support advertising investment - 2









Sinte

Unstructured Data

Sinte

Web crawling - 1

- **Request**: Get unstructured informations from web (articles, posts, advertising, photos...) transforming them in structured data for analysis
- **Approach**: Create a very intelligent crawler capable of acting and “thinking” as human.
- **Result**: An engine that collect **4 times articles** than the best competitor and collect **advertisement where no one else succeeded**

Sinte

Web crawling - 2

19-02-2013 [from 01-12-2012 to 31-12-2012]

	Chanel	Dior	Total
Italy	85	257	342
D.Repubblica.it	28	35	63
Elle.it	4	36	40
Grazia.it	46	84	130
MarieClaire.it	0	52	52
Repubblica.it	0	8	8
Style.it	0	42	42
VanityFair.it	7	0	7
total	85	257	342

19-02-2013 [from 01-12-2012 to 31-12-2012]

	Chanel	Dior	Total
Beauty	123	0	123
Fragrances	0	339	339
total	123	339	462

19-02-2013 [from 01-12-2012 to 31-12-2012]

Dior

	header	footer	popup	lateral	page body	background/skin	Total
Italy	35	0	0	176	36	10	257
D.Repubblica.it	35	0	0	0	0	0	35
Elle.it	0	0	0	30	0	6	36
Grazia.it	0	0	0	50	34	0	84
MarieClaire.it	0	0	0	52	0	0	52
Repubblica.it	0	0	0	4	0	4	8
Style.it	0	0	0	40	2	0	42
total	35	0	0	176	36	10	257

19-02-2013 [from 01-12-2012 to 31-12-2012]

Dior

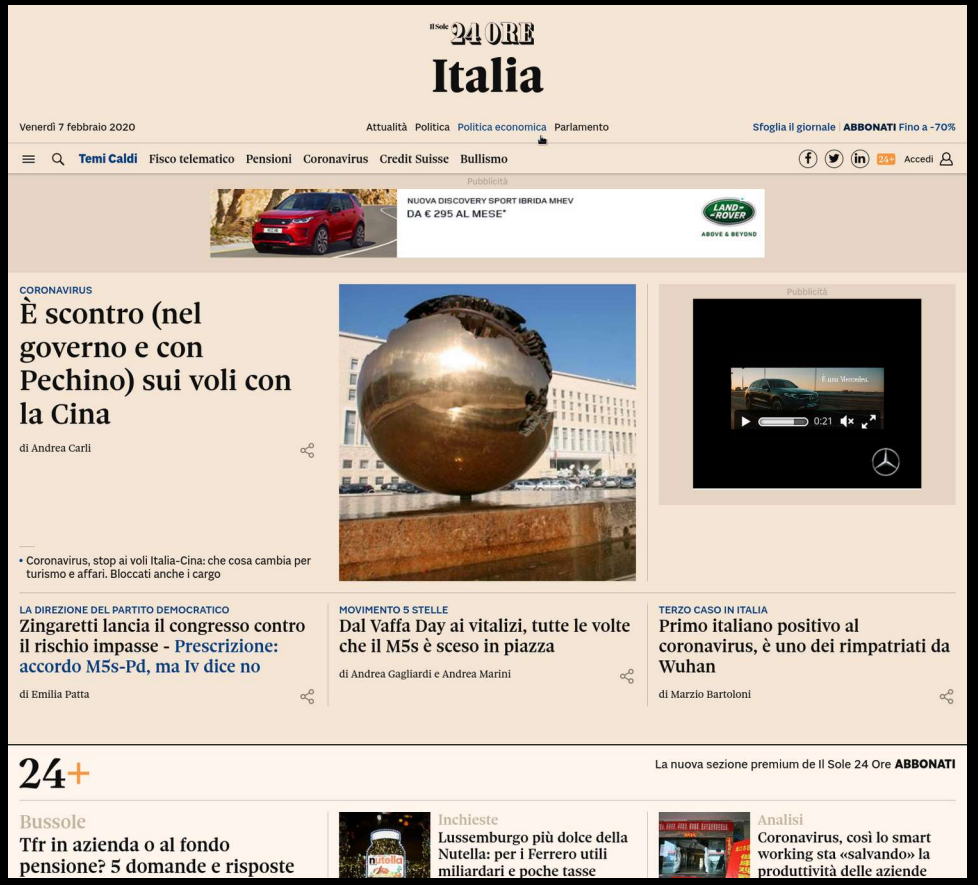
December 2012

	Days	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Positions
Italy		0	18	26	31	30	0	0	0	0	0	0	19	26	23	19	8	12	7	22	7	9	0	0	0	0	0	0	0	0	0	0	257
D.Repubblica.it	5		7 (46%)	7 (41%)	7 (33%)	7 (25%)								7 (25%)																			35
Elle.it	9			1 (25%)	3 (37%)	4 (18%)								5 (20%)	4 (33%)	4 (40%)				9 (52%)	3 (60%)	3 (60%)											36
Grazia.it	12		6 (60%)	13 (21%)	6 (54%)	5 (38%)							14 (22%)	8 (57%)	14 (21%)	11 (57%)			3 (60%)	1 (100%)	2 (66%)	1 (100%)											84
MarieClaire.it	14		3 (50%)	3 (50%)	3 (100%)	3 (100%)							5 (62%)	6 (20%)	5 (35%)	4 (36%)	4 (33%)	4 (100%)	4 (50%)	3 (33%)	2 (100%)	3 (100%)											52
Repubblica.it	4		2 (20%)	2 (20%)	2 (20%)	2 (20%)																											8
Style.it	6				10 (100%)	9 (47%)											4 (80%)	8 (66%)		9 (42%)		2 (100%)											42
total		0	18	26	31	30	0	0	0	0	0	0	19	26	23	19	8	12	7	22	7	9	0	0	0	0	0	0	0	0	0	0	257

19-02-2013 [from 01-12-2012 to 31-12-2012]

D.Repubblica.it [Italy]

	Chanel	Dior	Total
Oggetto del giorno	4	5	9
Oggi scelgo	4	5	9
Bellezza	4	5	9
Look	4	5	9
Vintage	4	5	9
Moda	4	5	9
Design	4	5	9
total	28	35	63



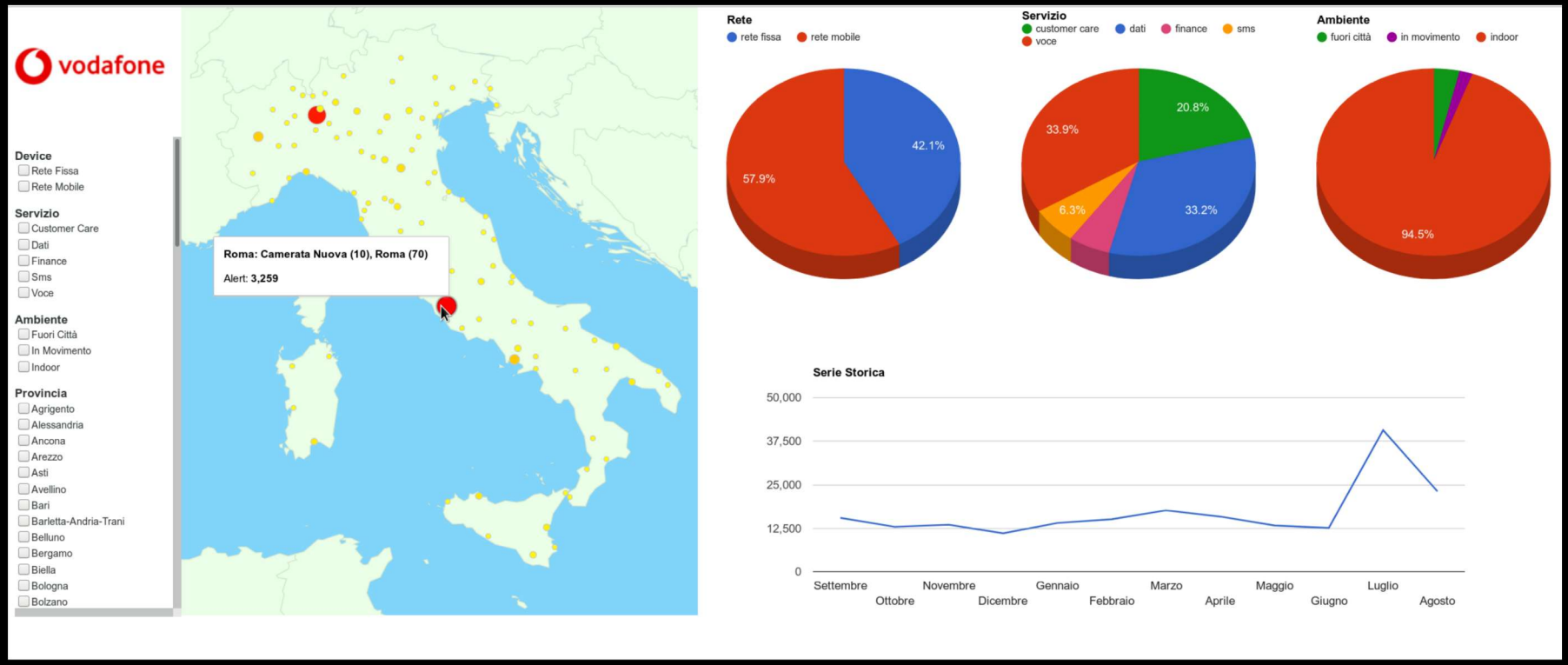
Sinte

Listening of the Web - 1

- **Request**: Detect and measure customers' perception of the service from Internet.
- **Approach**: Using a very powerful crawling engine, human trained semantic and sentiment algorithm and innovative mathematical model developed by us we create an engine which analyse what people says in Internet and social networks identifying the type of problem and where it is.
- **Results**: a solution which gives an hourly feed of information about: the problem, the devices impacted, the geolocation and the environment. Tested in production it **detect and correctly identify in real time more the 90%** of the problems.

Sinte

Listening of the Web - 2



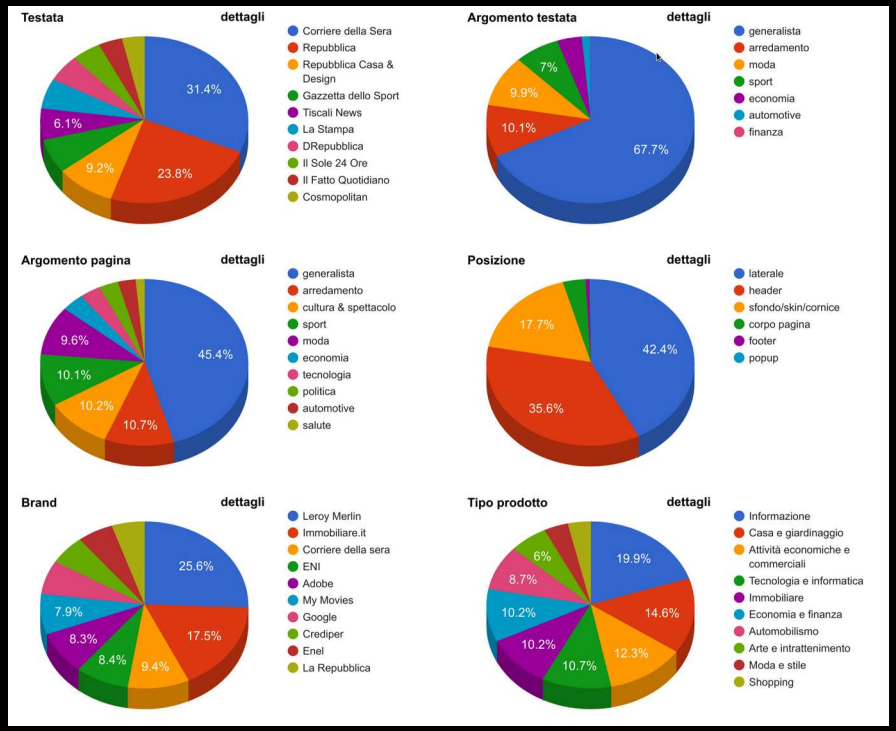
Sinte

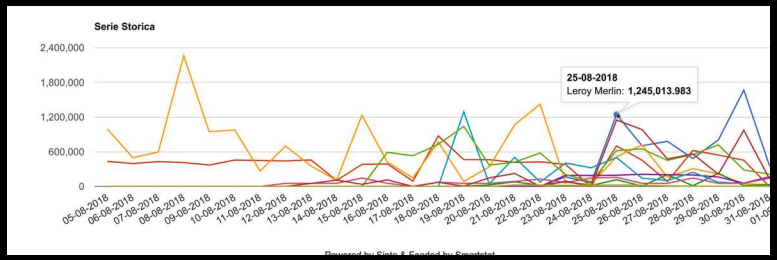
Advertising observatory - 1

- **Request**: Get a map of advertising online to understand market changes and to intercept clients who are investing in advertising.
- **Approach**: Use our crawler to constantly monitor the advertising on the web detecting websites, page level, advertiser, product, banner position and frequency, giving a daily report.
- **Result**: An engine that **collect the all investors in advertising both in (inter)national sites and in local sites (about what there aren't even aggregated informations)**

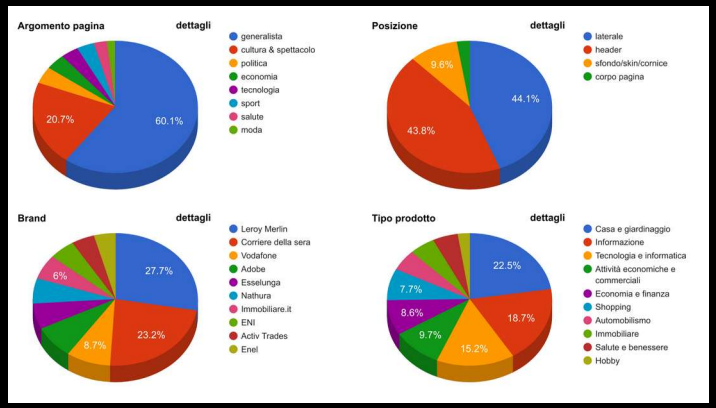
Sinte

Advertising observatory - 2

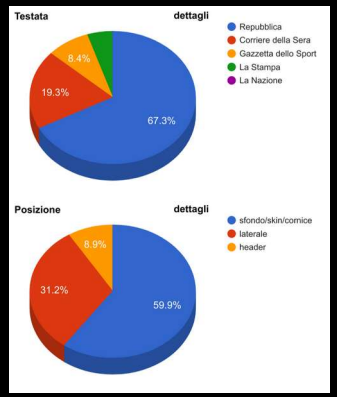




Corriere della sera



Dazn



Sinte

(Un)structured data discovery - 1

- **Request**: Identify the content of files in the company's repository to discover sensible data for GDPR and map the file in a complete GDPR solution.
- **Approach**: Create a solution as a mix of document parsing, regular expressions, list of data, sophisticated algorithm.
- **Result**: We are able to identify the sensible data inside Office documents, pdf, text files, images, audio and video.

Sinte

(Un)structured data discovery - 2

file: excel-5.xlsx

CC Sheet1

CC

Column	Pattern	Description	Distinct	Count	Rows	%
column 1 ()	P001	email	98	98	100	98%
column 2 ()	P004	telefono	10	10	100	10%
	P002	carta di credito	1	1	100	1%
column 3 ()	D001	nome	59	102	100	100%
	D002	cognome	106	145	100	100%
	D002_D001	Nome e Cognome	66	66	100	66%
column 4 (IBAN)	P003	iban	51	51	99	51%
	P004	telefono	24	48	99	48%
column 5 (nomi)	D001	nome	53	95	97	97%
	D002	cognome	46	84	97	86%
column 6 (cognomi)	D002	cognome	61	61	100	61%
	D001	nome	7	7	100	7%
column 11 (null)	P004	telefono	1	48	74	64%

Pattern	Description	Distinct	Count
P001	email	98	196
P002	carta di credito	1	2
P003	iban	51	51
P004	telefono	58	116
D002_D001	Nome e Cognome	66	212
D001	nome	59	306
D002	cognome	106	435

Pattern	Description	Value	Count
P001	email	aaron_ketterl@principledoman.com	2
P001	email	adanruegger@gmail.com	2
P001	email	adena-corpeno@yandex.com	2
P001	email	adrienzeinert@needrontosportiks.com	2
P001	email	agatha_mellom@hotmail.com	2
P001	email	agnus_newbill@gmail.com	2
P001	email	agueda-perina@gmail.com	2
P001	email	agustinadally@gmail.com	2
P001	email	aidacrotzer@yahoo.com	2
P001	email	alanmondoux@yahoo.com	2
P001	email	aleciaostlie@gmail.com	2
P001	email	alene_straube@darlonnigga.com	2
P001	email	aleshia-culcasi@gmail.com	2
P001	email	alex_faddis@aol.com	2
P001	email	alix-walat@andertrapvostan.com	2
P001	email	alma_kacic@gmail.com	2
P001	email	almeta_sampley@gmail.com	2
P001	email	alonzo_berumen@aikazemi.com	2
P001	email	alonzoree@domainanalyticsart.com	2
P001	email	altha-middents@gilmorestradingsolution.com	2
P001	email	alvaeans@isthereyou.com	2

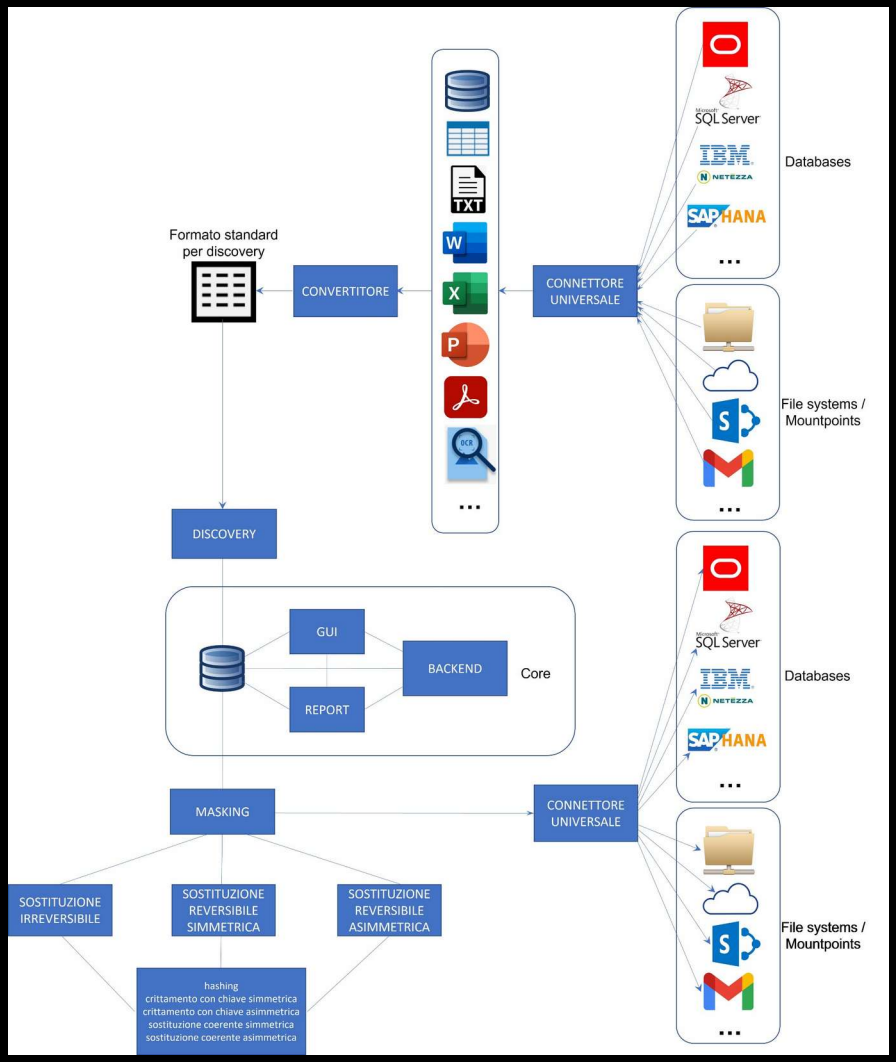
Sinte

Data Masking - 1

- **Request**: A solution able to identify which kind of (personal) data are in the company's repositories (databases, filesystems …) and to mask them in different way according to different needs.
- **Approach**: Using a mix of innovative solutions to read and write data from different sources and analyse them in a big data environment to easily scale.
- **Result**: A solution capable to analyse **huge amount of data in few minutes**, using AI to reduce false positive and false negative.

Sinte

Data Masking - 2



Sinte

Ranking

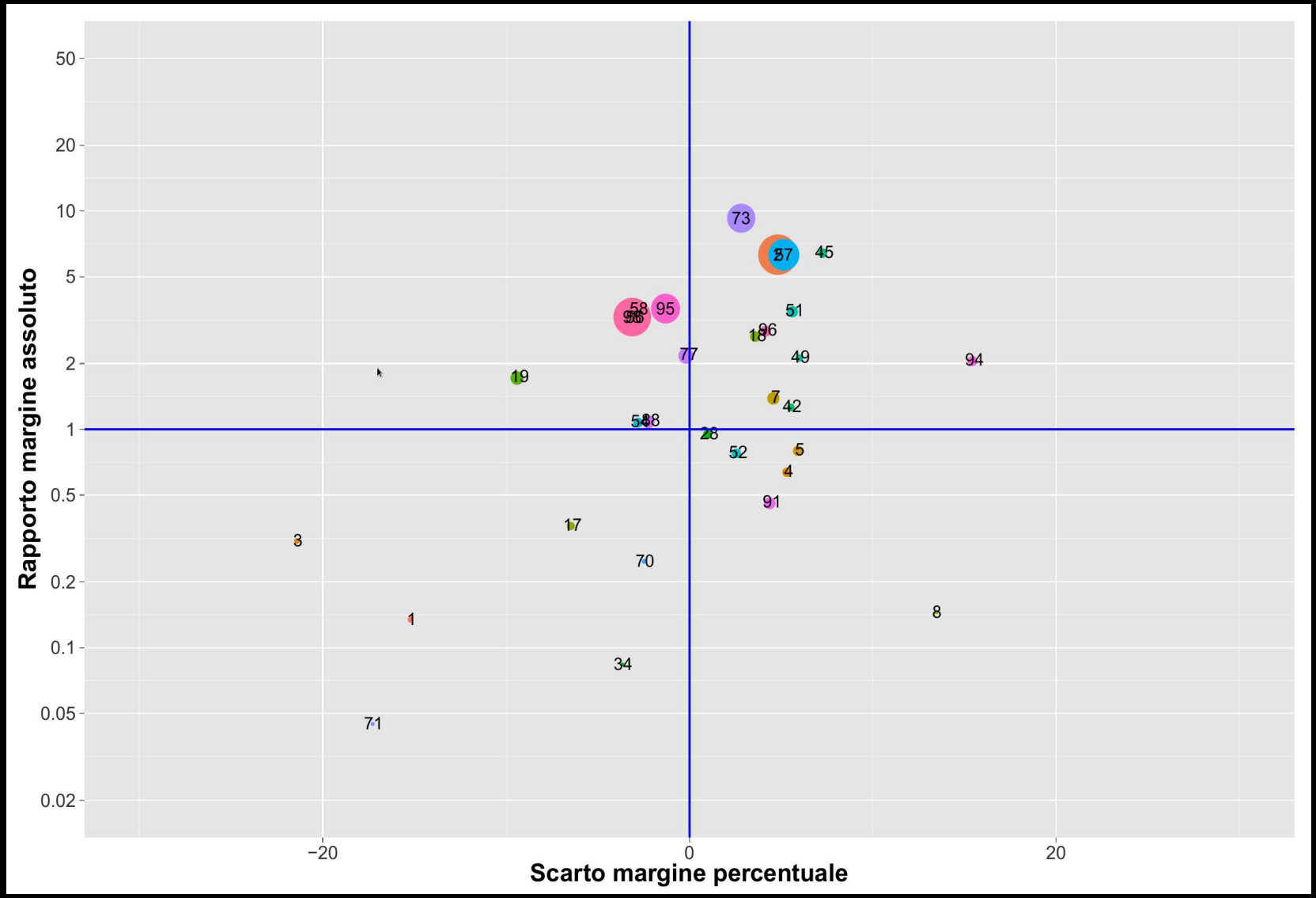
Sinte

Sales-force evaluation - 1

- **Request**: Find a way to compare performance of hundreds of business agents engaged in different areas, different clients (**Carrefour**, **Auchan**...) and different part of the catalogue.
- **Approach**: Study a new model that scientifically balance advantages and disadvantages according to data, “playing all agents in the same field”.
- **Result**: **A new indispensable tool**: a map with recalculated absolute and relative margin where our customer could really compare the performance.

Sinte

Sales-force evaluation - 2



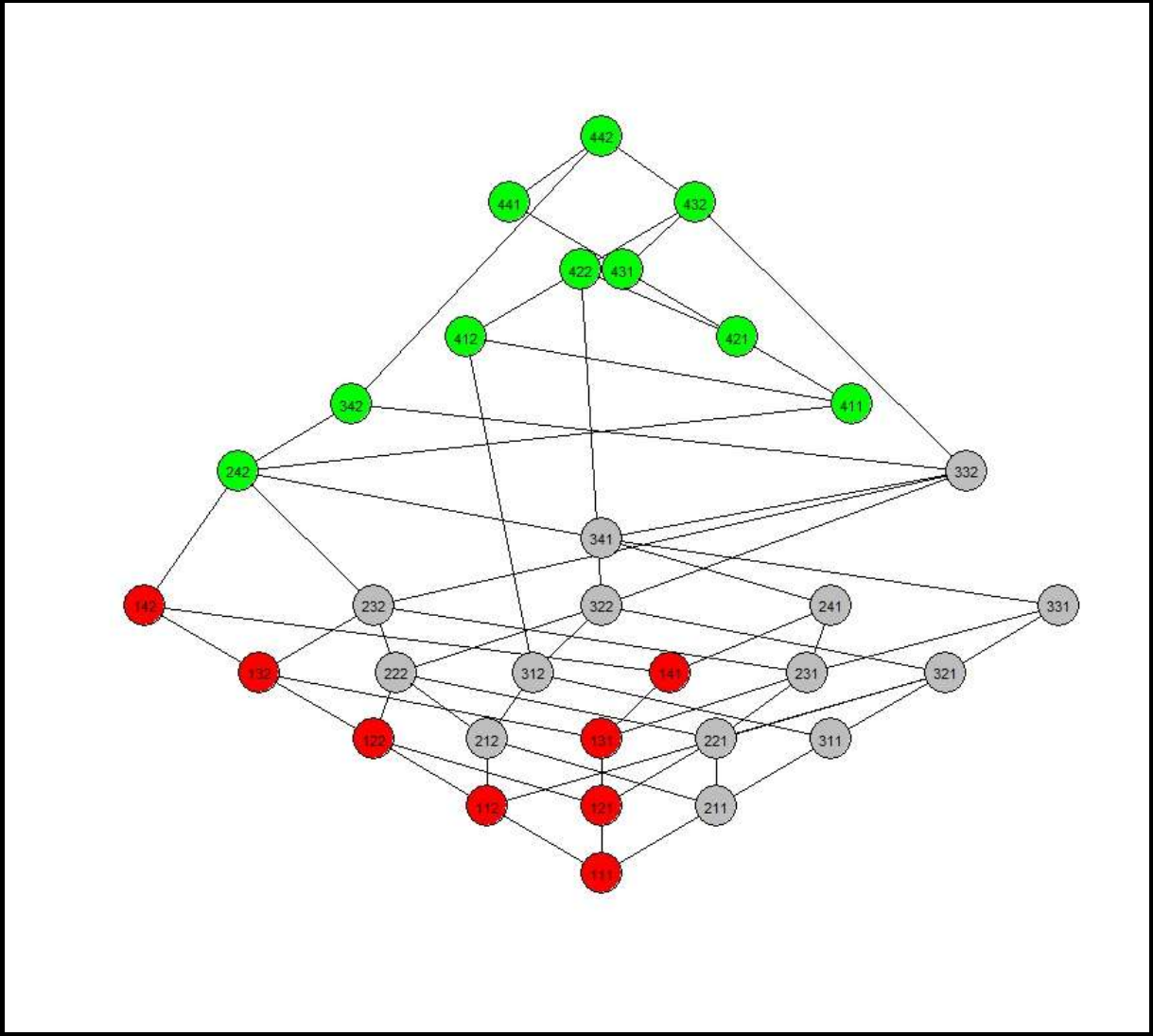
Sinte

Prospecting - 1

- **Request**: To sobstitute former systems which give a score of probability to acquire each prospect.
- **Approach**: Using ordinal variables models (typical of social science) we developed a revolutionary solution that:
  - asks to human inputs more similar to their way to think
  - creates a score mathematically correct
- **Results**: a new model able to identify company that will make the 90% in a group **5 times more narrow** than the former model.

Sinte

Prospecting - 2



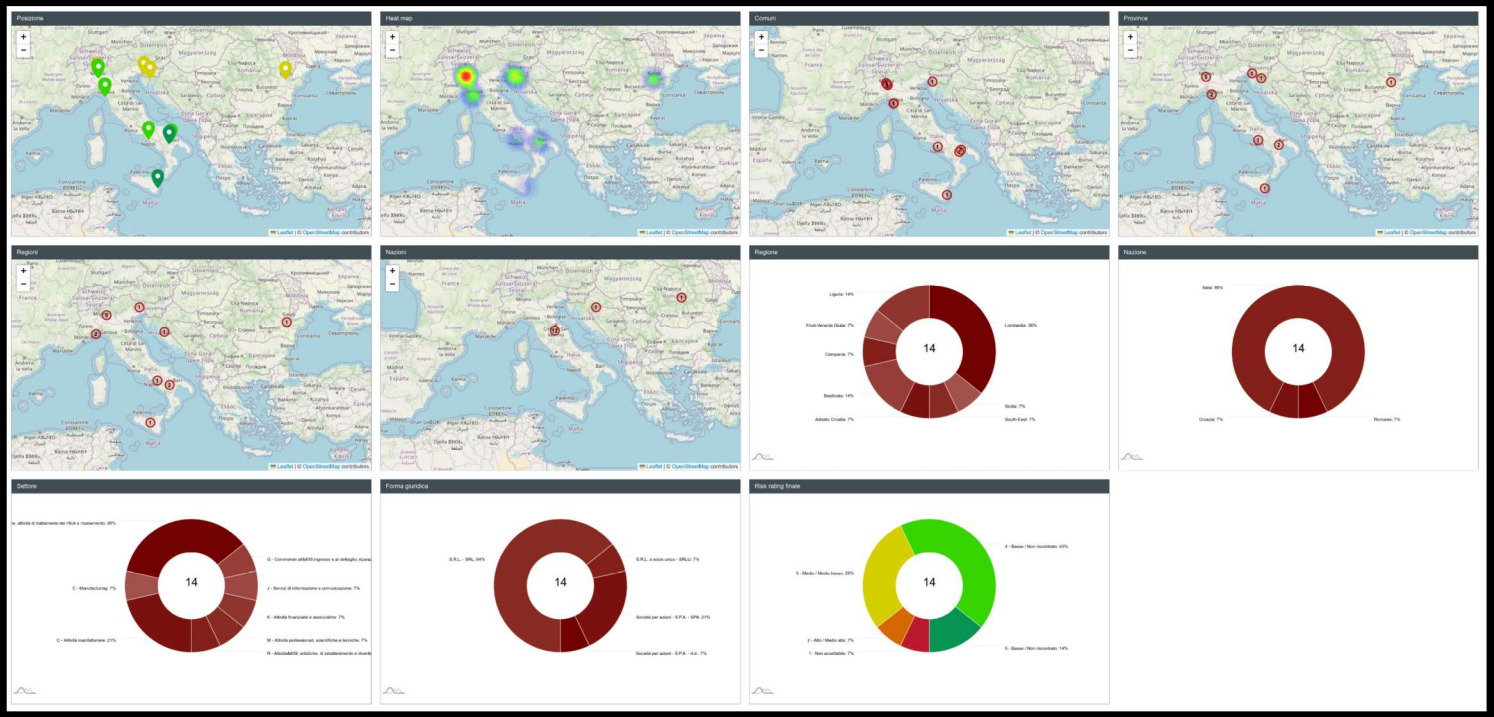
Sinte

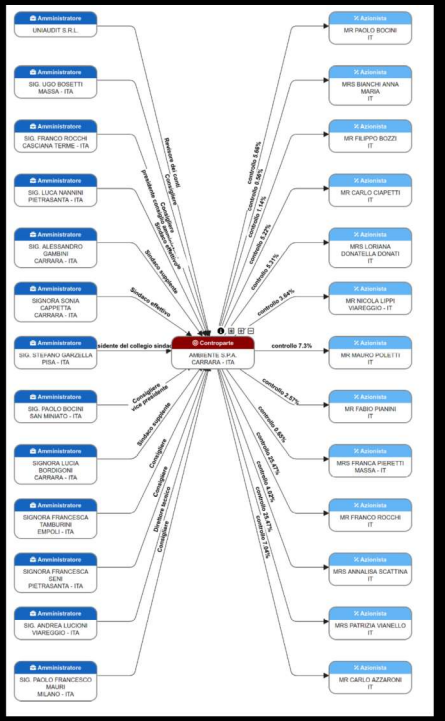
Suppliers ranking - 1

- **Request**: An application to analize and evaluate automatically suppliers and keep them under costant control
- **Approach**: Developing a lot of connector to multiple sources and an AI solution to calculate KPIs
- **Results**: **Thousands of suppliers** under continue **control** with a little human effort and a smart alert system to help fast interventions

Sinte

Suppliers ranking - 2





Sinte

Image recognition

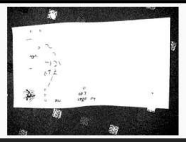
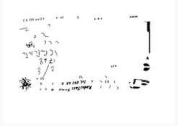
Sinte

Handwriting recognition - 1

- **Request**: Automatically identify the price and the date from the images of taxi receipts sent by employers using their cellphones.
- Approach: A mix of innovative pattern recognition solution, smart algorithms and machine learning systems to deliver the result.
- Results: the first engine identify the correct value of the invoice in 31,24% of the receipts (where the former suppliers arrived to 4%, **7,5 times better than our competitor**).

Sinte

Handwriting recognition - 2

#	file	tipo	data	value	score
135		001_01	/8/2018 (06/08/2018)	14.8 (50.0)	9999.99
#	file	tipo	data	value	score
137		001_02	1848 (06/08/2018)	18.8 (50.0)	9999.99
#	file	tipo	data	value	score
139		001_03	(06/08/2018)	9.0 (50.0)	9999.99
#	file	tipo	data	value	score
132		002	(06/08/2018)	(50.0)	
#	file	tipo	data	value	score
134		002_00	1748 (06/08/2018)	6.0 (50.0)	10.0
#	file	tipo	data	value	score
136		002_01	/8/2018 (06/08/2018)	10.0 (50.0)	9999.99
#	file	tipo	data	value	score
138		002_02	63/3/2092 (06/08/2018)	54.6 (50.0)	9999.99

Sinte

Image pattern recognition - 1

- **Request**: Automatically identify the correct image taken in different angle, surface and illumination.
- Approach: A pattern recognition engine able to identify images in every condition.
- Results: the first engine identify the correct image in **92% of cases**.

Sinte

Image pattern recognition - 2

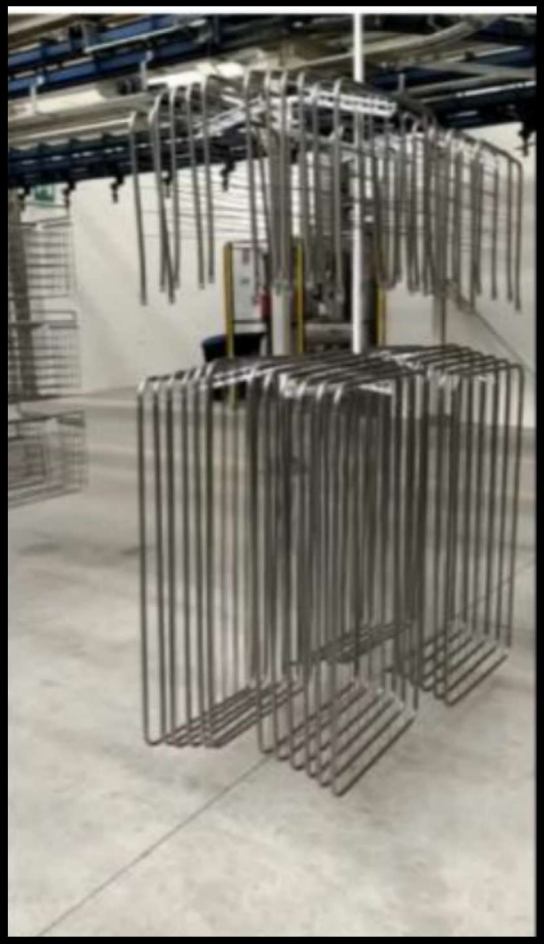
Sinte

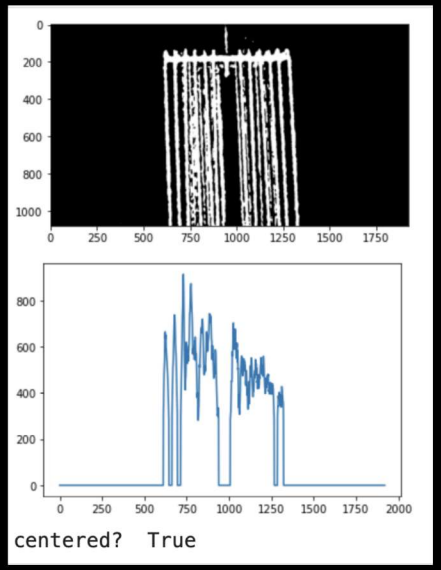
Production control - 1

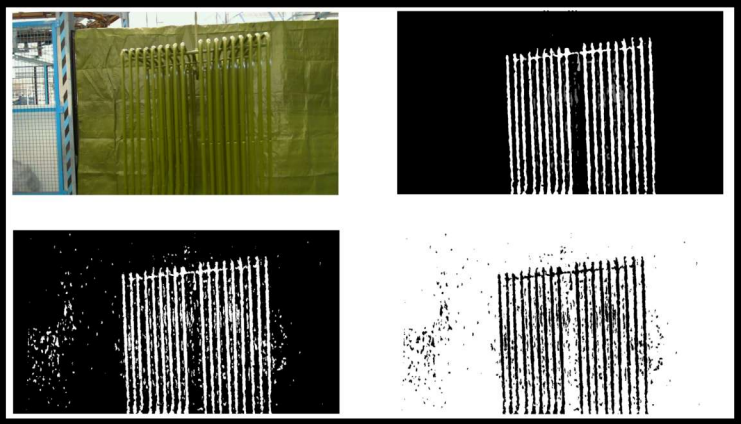
- **Request**: In industrial environment count produced pieces to control wastes and correct shipping
- **Approach**: Use image recognition and neural network models to recognise models and count produced pieces
- **Results**: Accuracy **100%**

Sinte

Production control - 2







Sinte

Farm 4.0 - 1

- **Request**: To monitor the weight of the cows in a big pharm without the need to buy a lot of weighbridges: expensive and hard to maintain.
- **Approach**: To use low cost camera and NFC ear tag to identify the correct growth of each animal with image recognition models.
- **Results**: A **terrific saving** (15 K€ vs 1 M€), quite **null maintenance** and **more information** about the growth besides the weight.

Sinte

Farm 4.0 - 1

Sinte

BI solutions

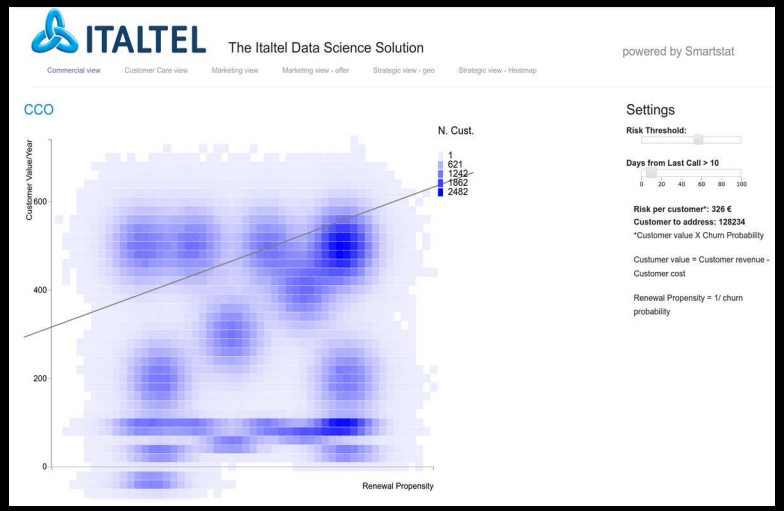
Sinte

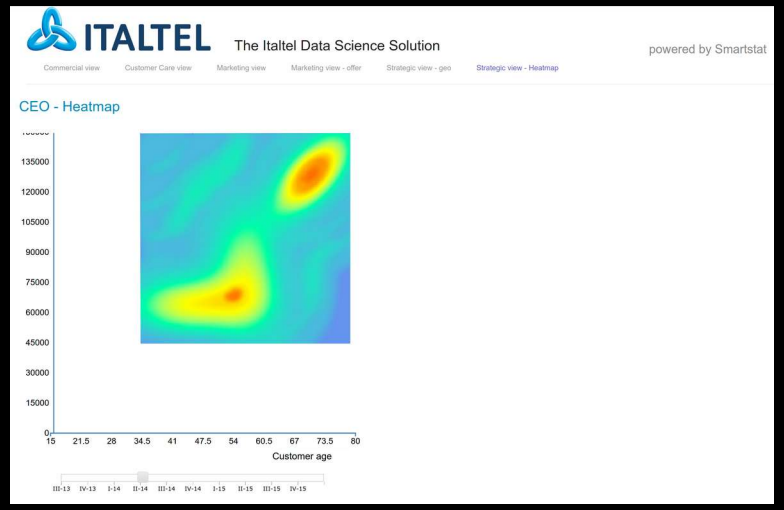
Antichurn managment – 1

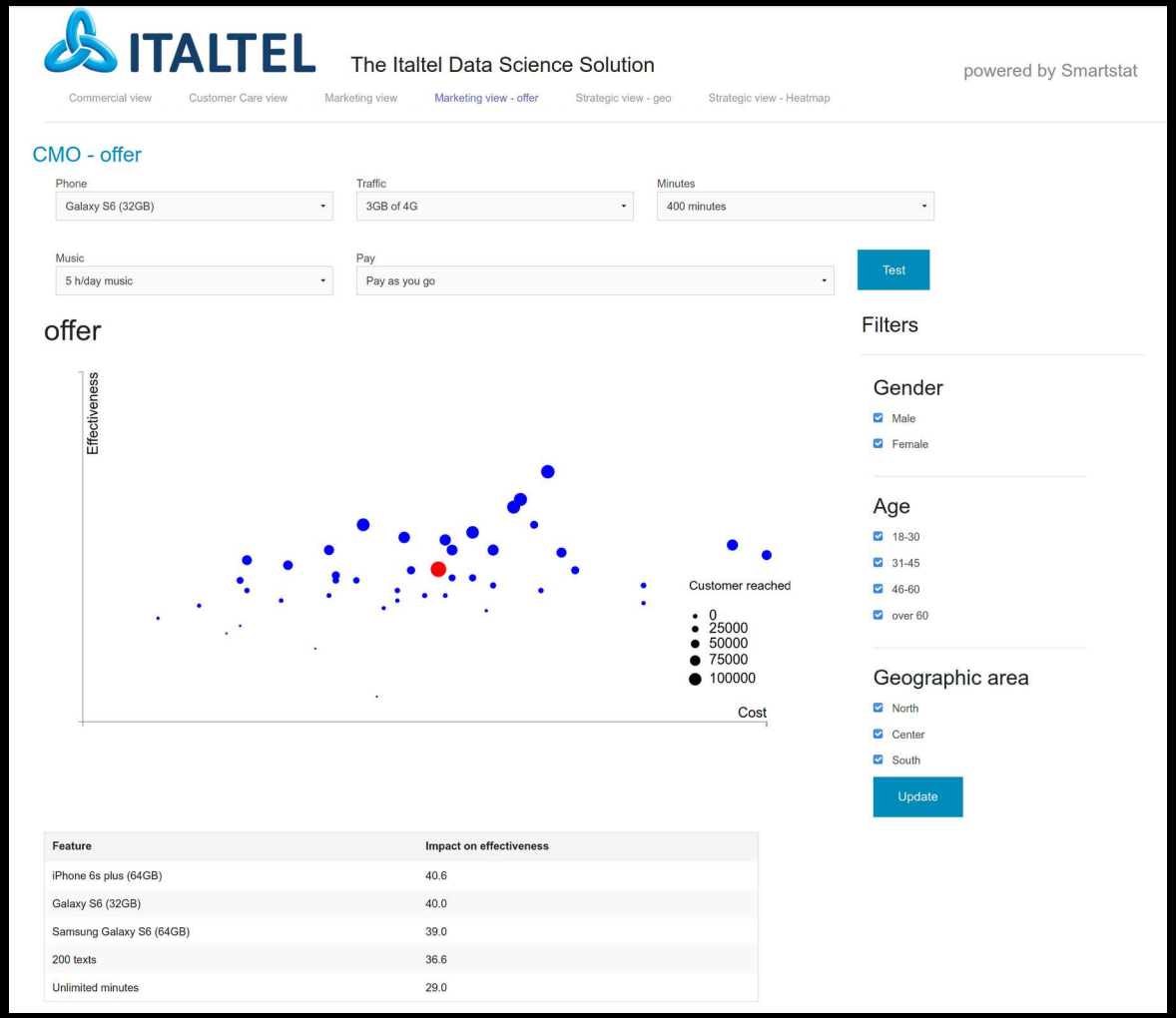
- **Request**: a tool to manage customer retention activity according to antichurn prediction models
- **Approach**: a completely customized interface for different type of use (Commercial team, CCO, CMO, CEO)
- **Results**: a high appreciated web application that has big success at the Mobile World Congress 2016

Sinte

Antichurn managment – 2







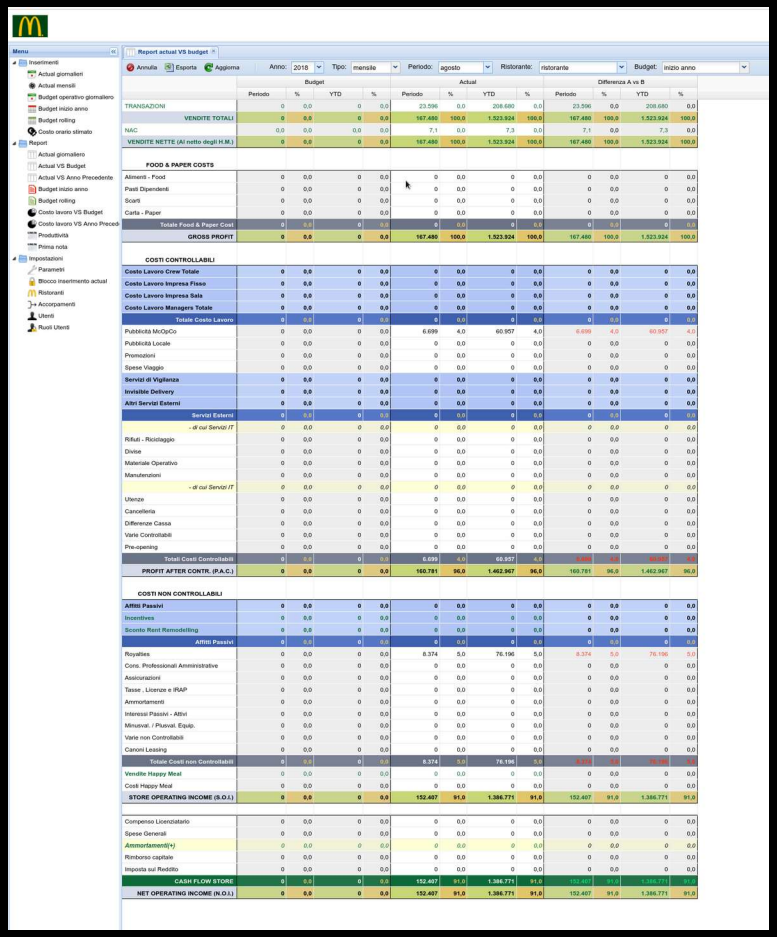
Sinte

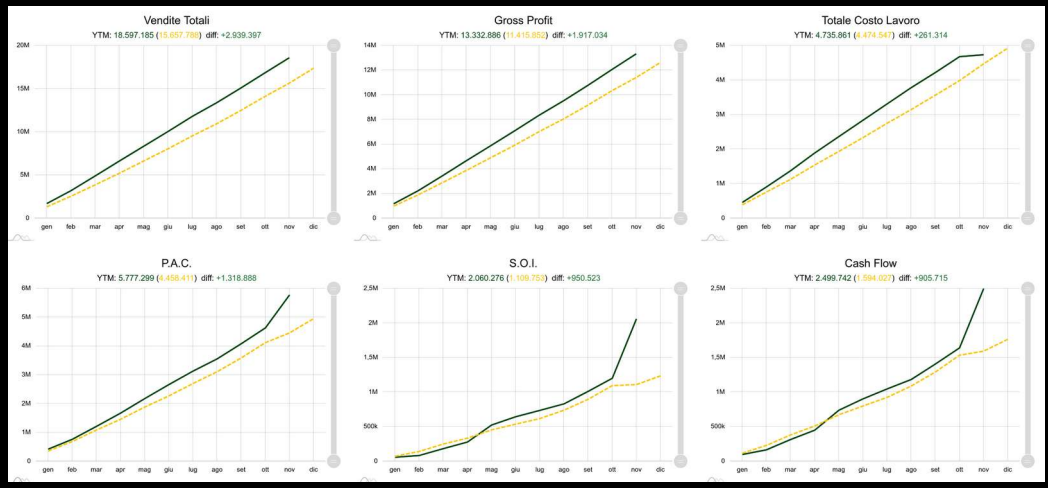
Business Intelligence for food - 1

- **Request**: A easy-to-use software to manage a multi-restaurants company at-a-glance.
- **Approach**: Create a very customisable software able to adapt itself to every need of the different franchisers.
- **Results**: A very appreciated system used now in 45 McDonald's restaurants (number increasing)

Sinte

Business Intelligence for food - 2





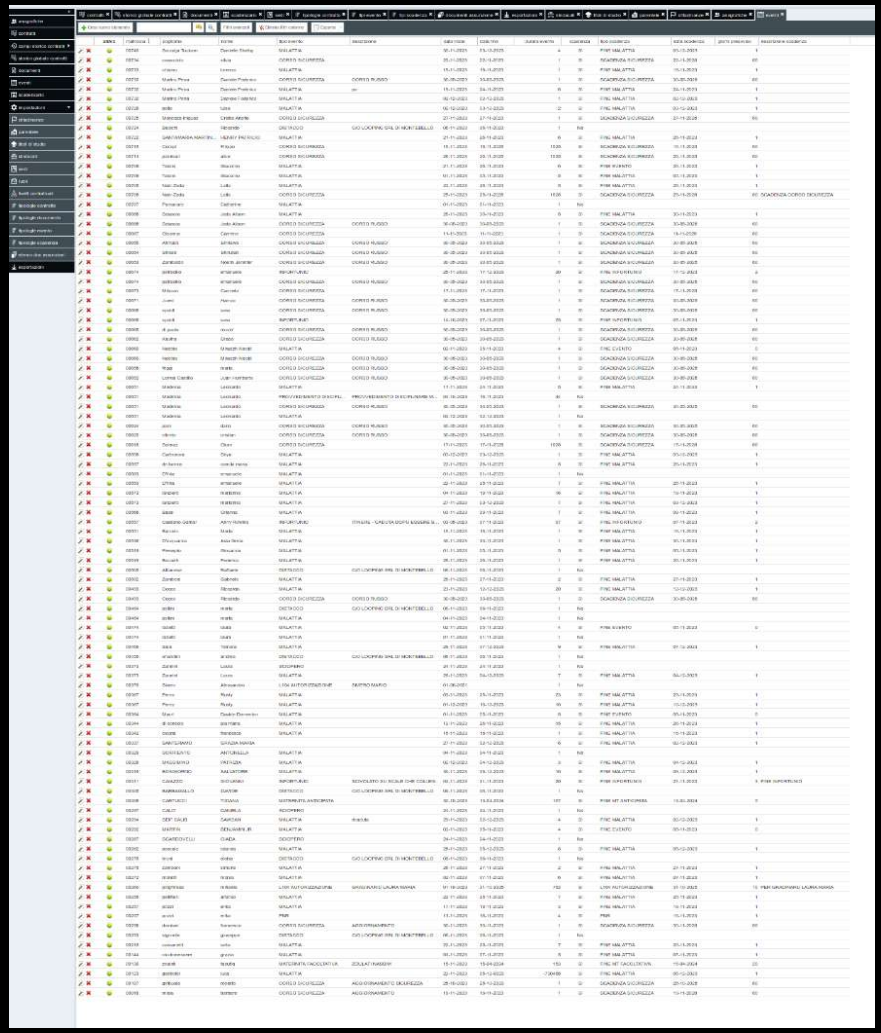
Sinte

HR management - 1

- **Request**: A solution to manage employers so that paper and time lost are reduced quite to zero.
- **Approach**: A web application that automatize all possible procedure and interact directly to all employers through their smartphones.
- **Results**: Reduce of errors, situation under constant control, speedup of procedures and more time for HR to follow employers.

Sinte

HR management - 2



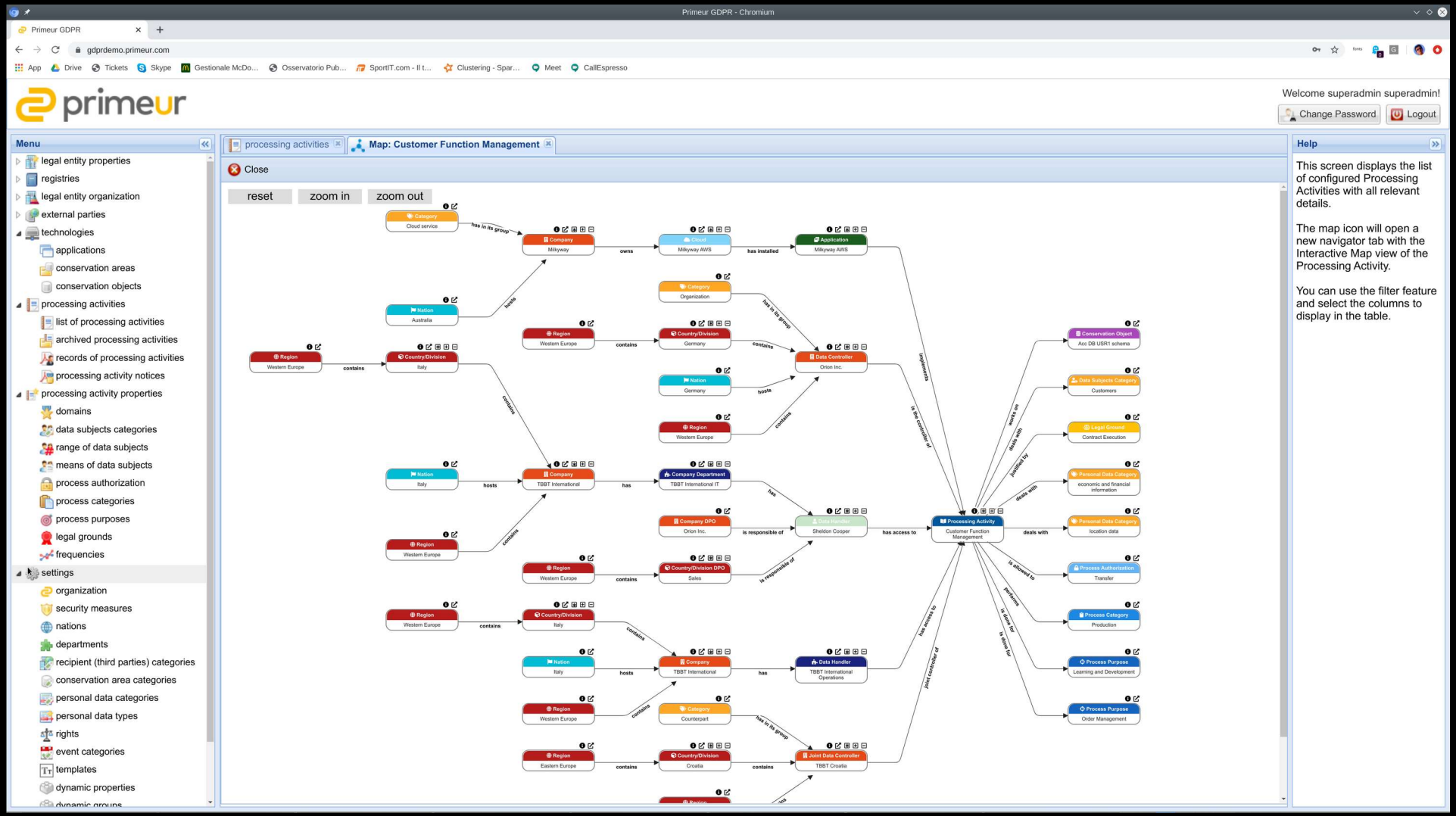
Sinte

GDPR managment - 1

- **Request**: A software able to help DPO to compile the GDPR information and to provide automatically all the documentation required.
- **Approach**: Create a very versatile solution able to fit different needs, to be feeded by syncronized solution, to automate the discovery and to create easy-to-consult visual maps.
- **Results**: A very appreciated solution used now from the small company to the multinational corporation.

Sinte

GDPR managment - 2



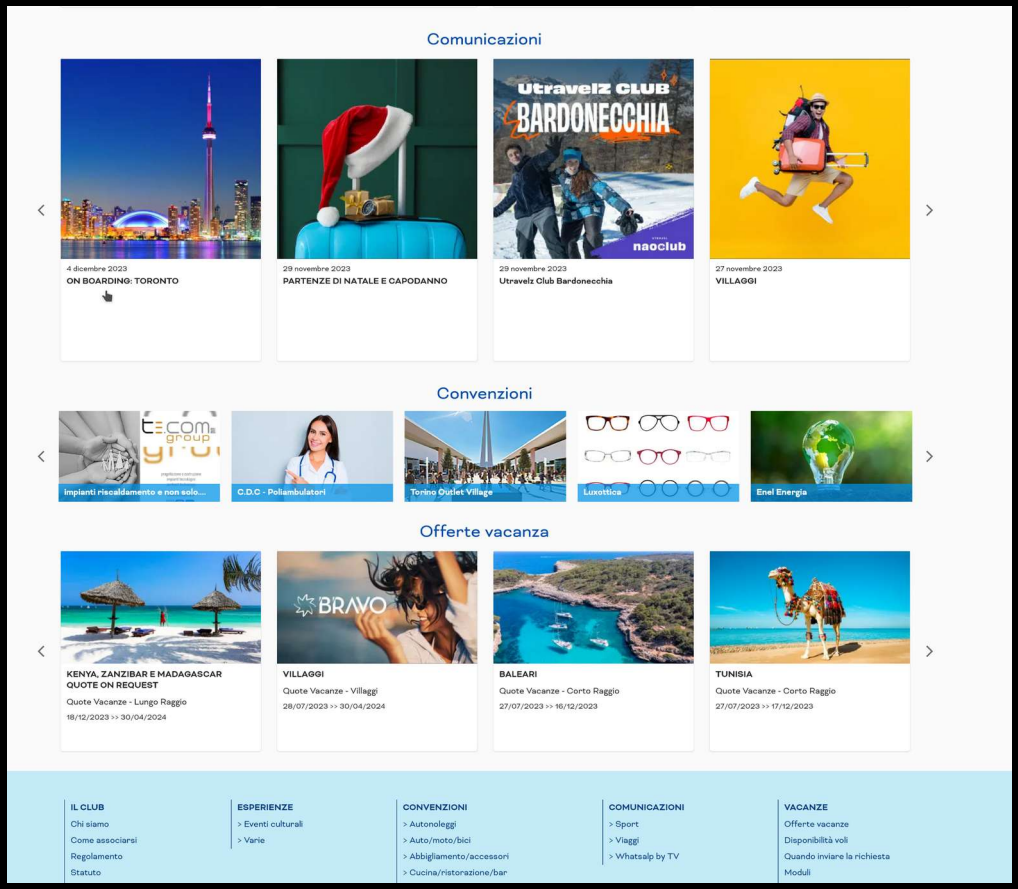
Sinte

CRAL managment - 1

- **Request**: A software able to help cral employers to manage all kind of offers and products for all member.
- **Approach**: A mix of a BI software and an interactive website able to automatize all procedures reducing dramatically human effort.
- **Results**: Reducing of time to manage tasks from **5 to 20 times**.

Sinte

CRAL managment - 2



Sinte

Industry

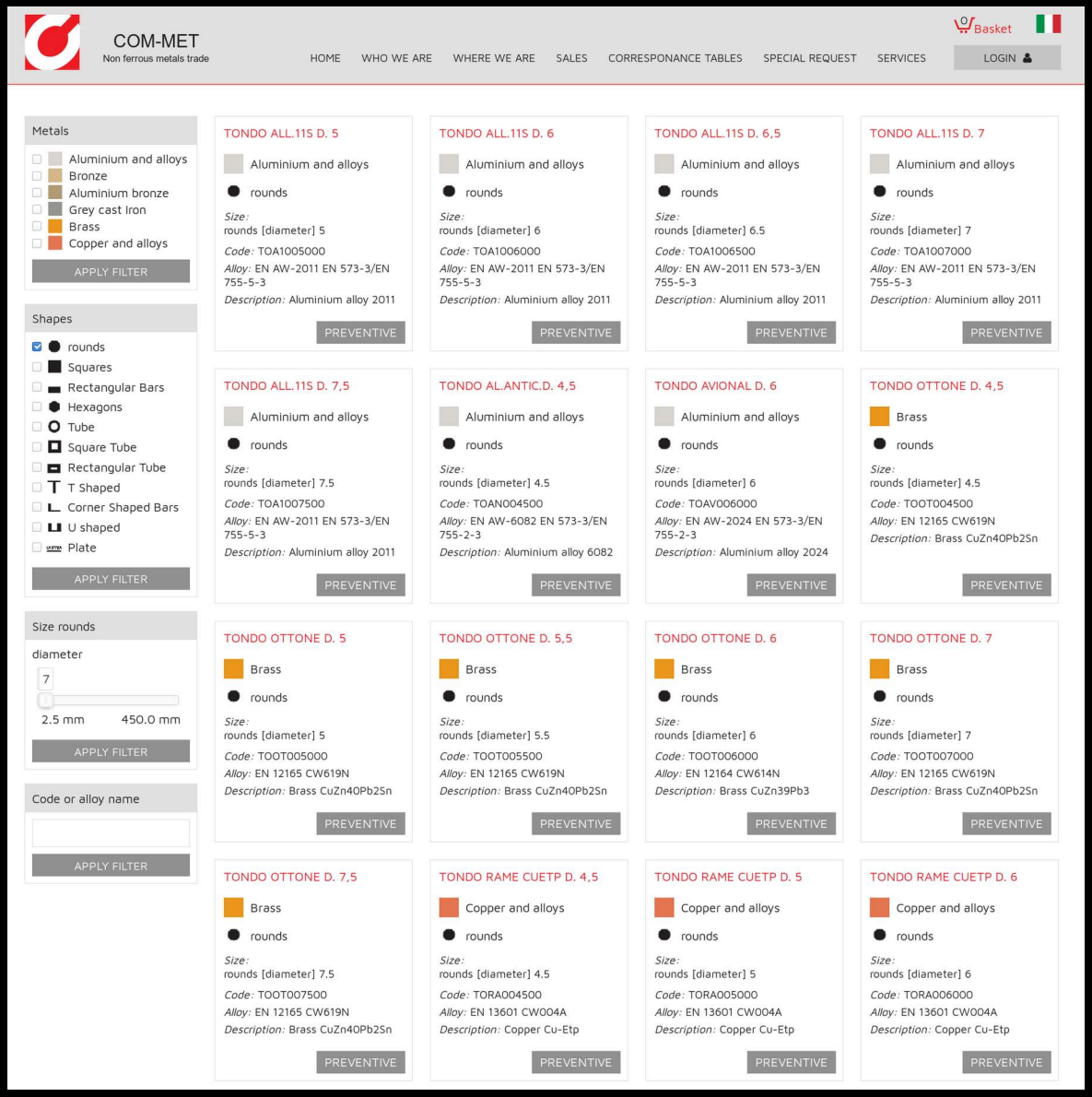
Sinte

Price algorithm - 1

- **Request**: To automatically identify the right price for an order of metal bars or plates of the dimensions requested by the customer in a e-commerce site
- **Approach**: a powerful collecting engine that gathers prices of base metal and alloys from different sources (such as London Metal Exchange and Assomet database) feeds a sofisticated algorithm that consider tens of variables (such as time to cut the metal, chippings of the cut, waste parts, the need to use fork lift, the stock ammount, the prices timeseries) to determine the correct sell price.
- **Results**: An engine in production **from 2005**.

Sinte

Price algorithm - 2



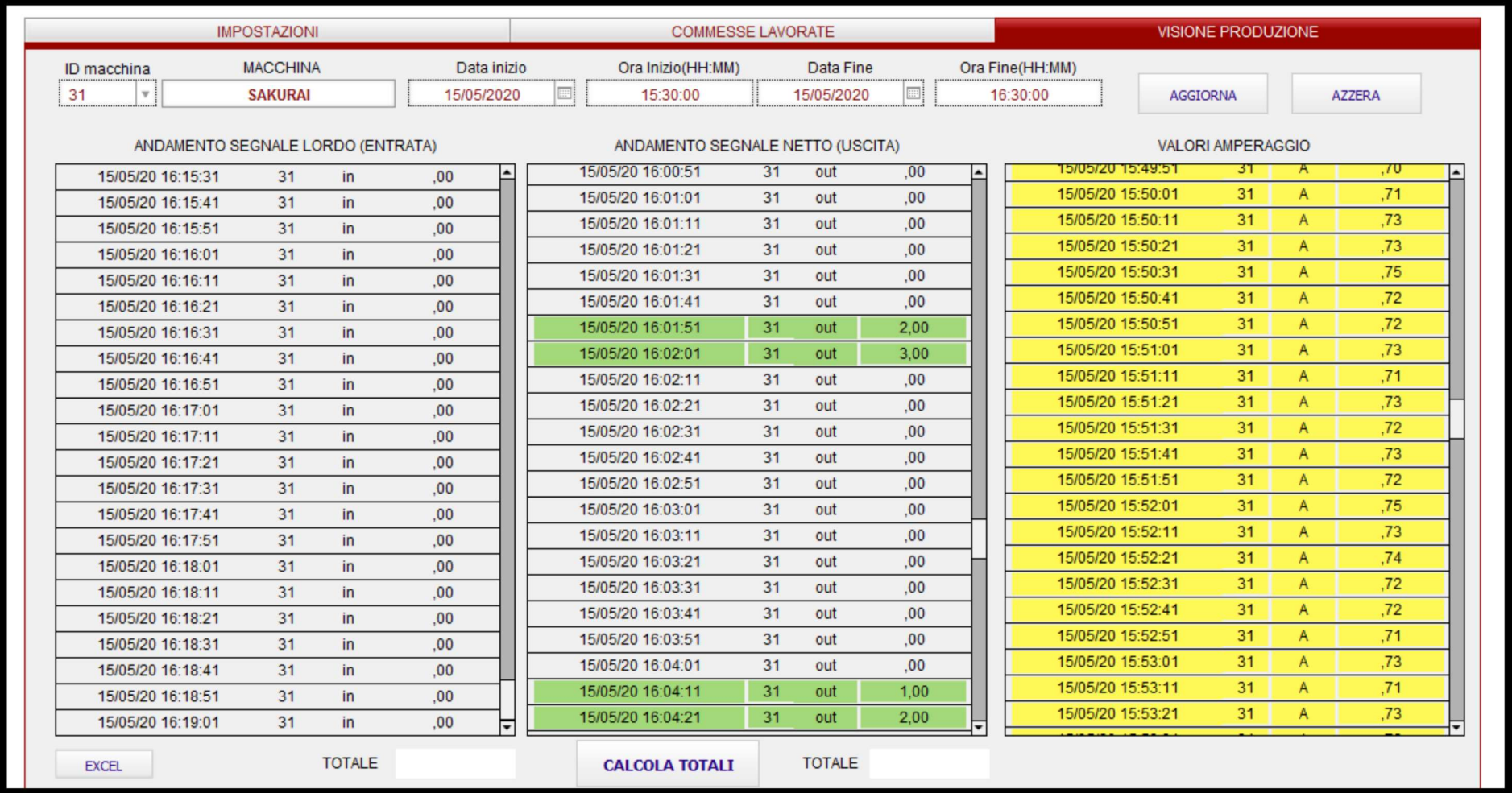
Sinte

Industria 4.0 solution - 1

- **Request**: To create a solution able to monitor all the production phases.
- **Approach**: To deveop an open solution to control all the production using Arduino's devices and Rasperry mini PCs in order to detect and record different parameteers of each machine.
- **Results**: The firm is now able to control all the processing.

Sinte

Industria 4.0 solution - 2



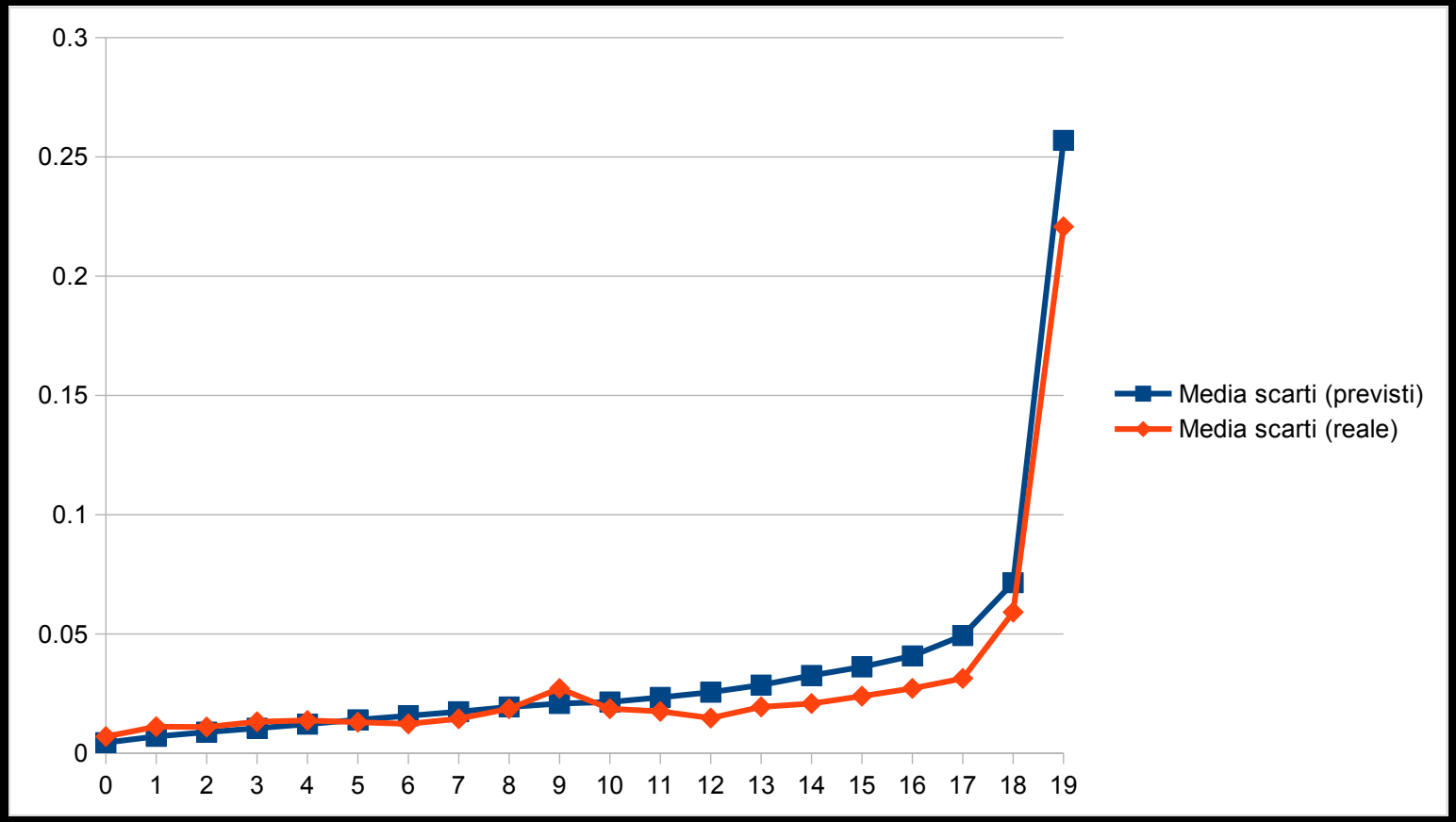
Sinte

Industrial optimization - 1

- **Request**: Find innovative algorithms to control industrial production (lines optimisation, find best settings, reduce defectiveness, assemble best teams)
- **Approach**: Collect new data and feedback according to the needs, create a central engine, design all the artificial intelligence algorithm able to deliver the information required
- **Results**: Identification of three very important aims and design of all the process to get them. In one (discards forecast) we developed a machine learning model which is able to predict very well.

Sinte

Industrial optimization - 2



Sinte

Mobile app

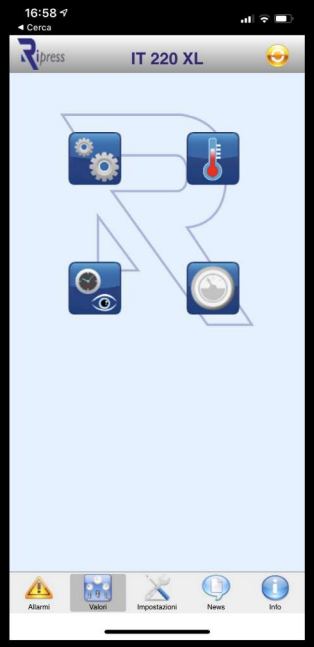
Sinte

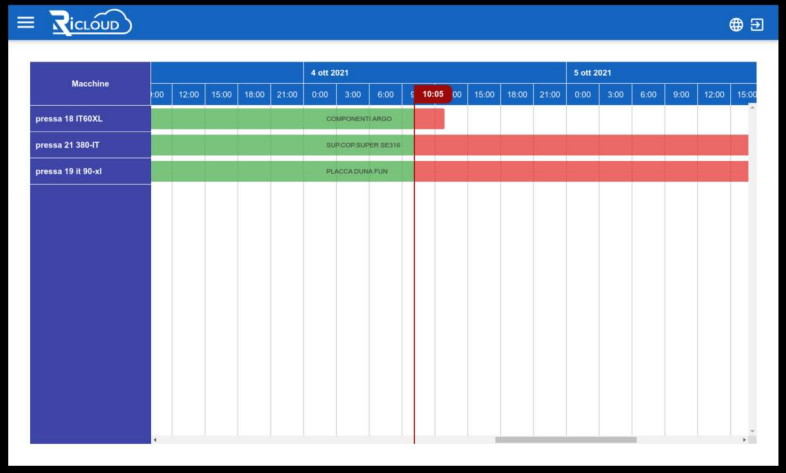
Mobile app industry - 1

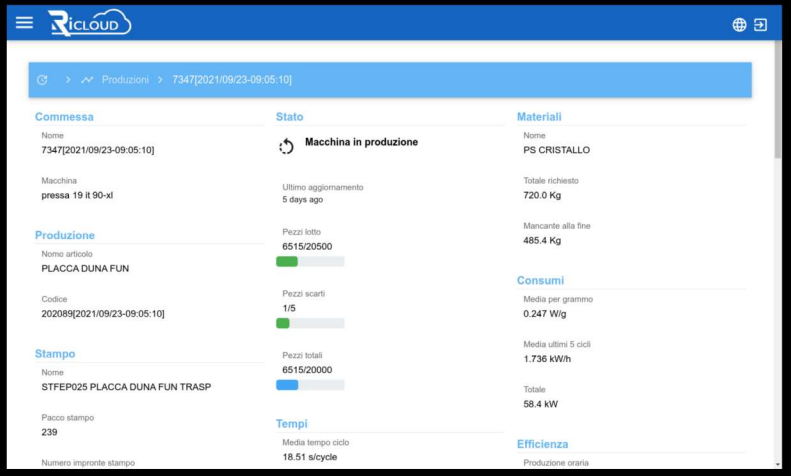
- **Request**: To develop a mobile app able to interact with industrial 24h-functioning machines
- **Approach**: a cross-platform mobile app that allows to view and modify values in the machine and a web application that comunicates both with the machines (via modbus) and with the mobile app
- **Results**: A solution that allows production firm to control all the machines from wherever and to receive push notification according to settings customizable for each machine.

Sinte

Mobile app industry - 2







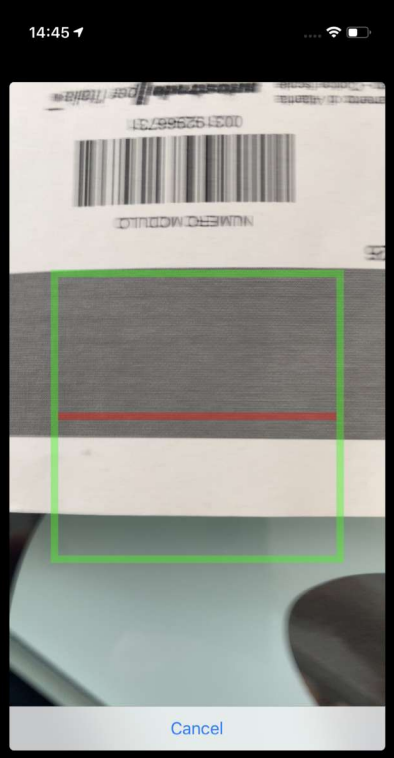
Sinte

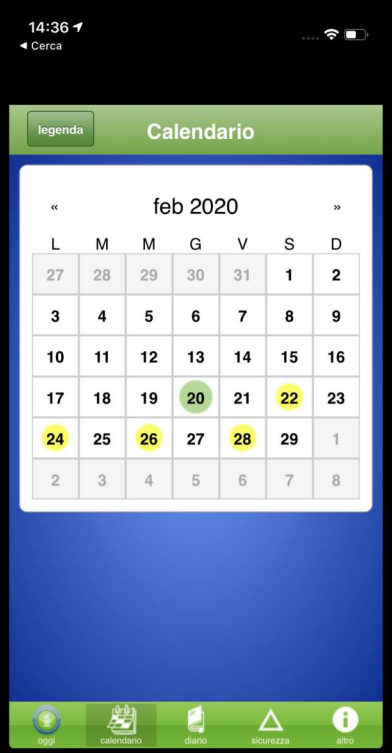
Medical support app - 1

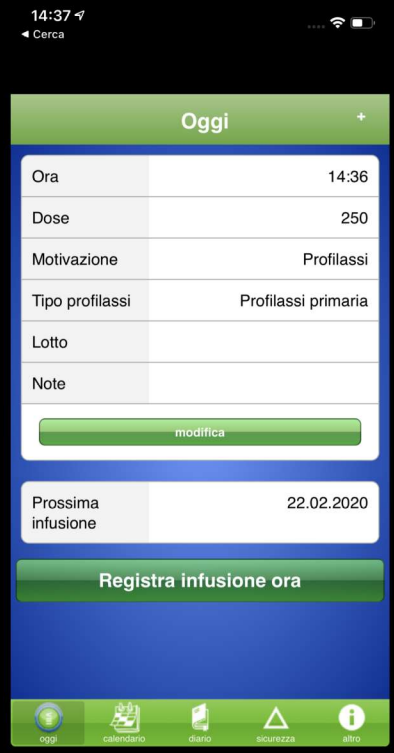
- **Request**: Create an app to help patients to remember the scheduling of the medicines, to track the history with the batch number, and to keep the doctor up-to-date
- **Approach**: Realize an app for iOs and Android that help the patients to easy track all the time he takes the medicine and to help the pharmaceutical to monitor the needs.
- **Results**: A very useful app used by many patients.

Sinte

Medical support app - 2







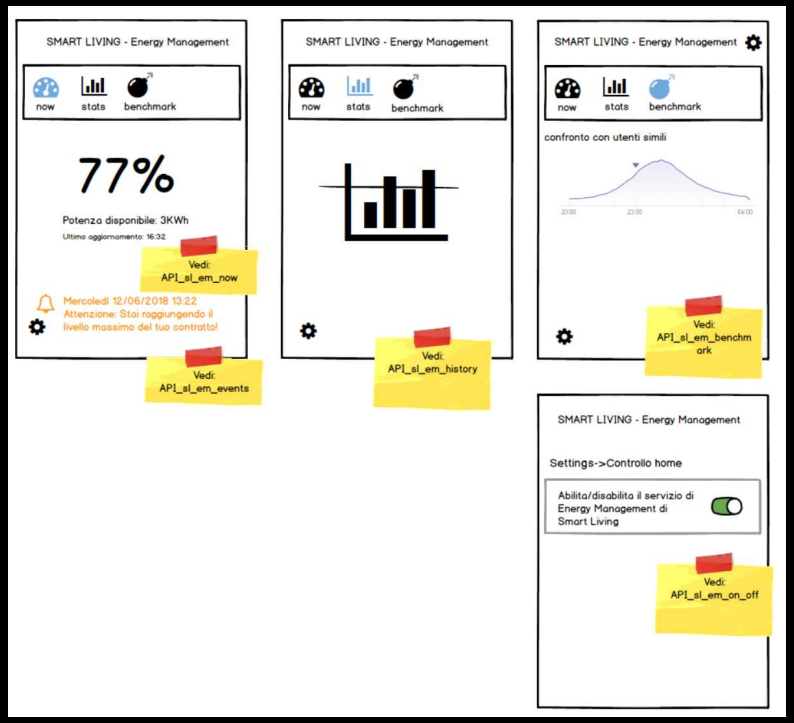
Sinte

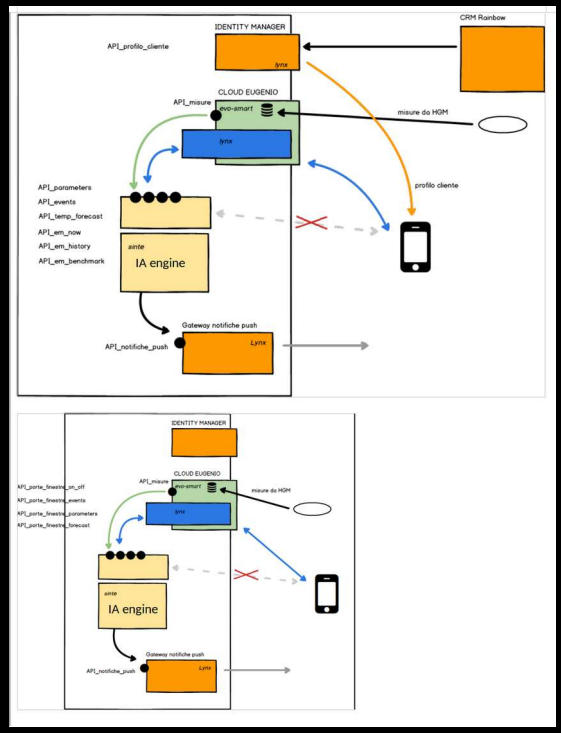
Smart Living - 1

- **Request**: A solution that takes data from thousands of probes and sensors ad forecast temperature and energy saving solution
- **Approach**: A big data scalable infrastructure with modern models
- **Result**: A solution that, thanks to its innovative approach, received public financing of 140.000 euro from Regione Lombardia.

Sinte

Smart Living - 2





Sinte

3D app game simulation - 1

- **Request**: Create an app able to simulate the real game in 3D
- **Approach**: An hard work to import or the 3D models of every pieces to reduce computational effeort of the device maintaining the image quality
- **Results**: The very first app of this genre in the world

Sinte

3D app game simulation - 2

Sinte

Science

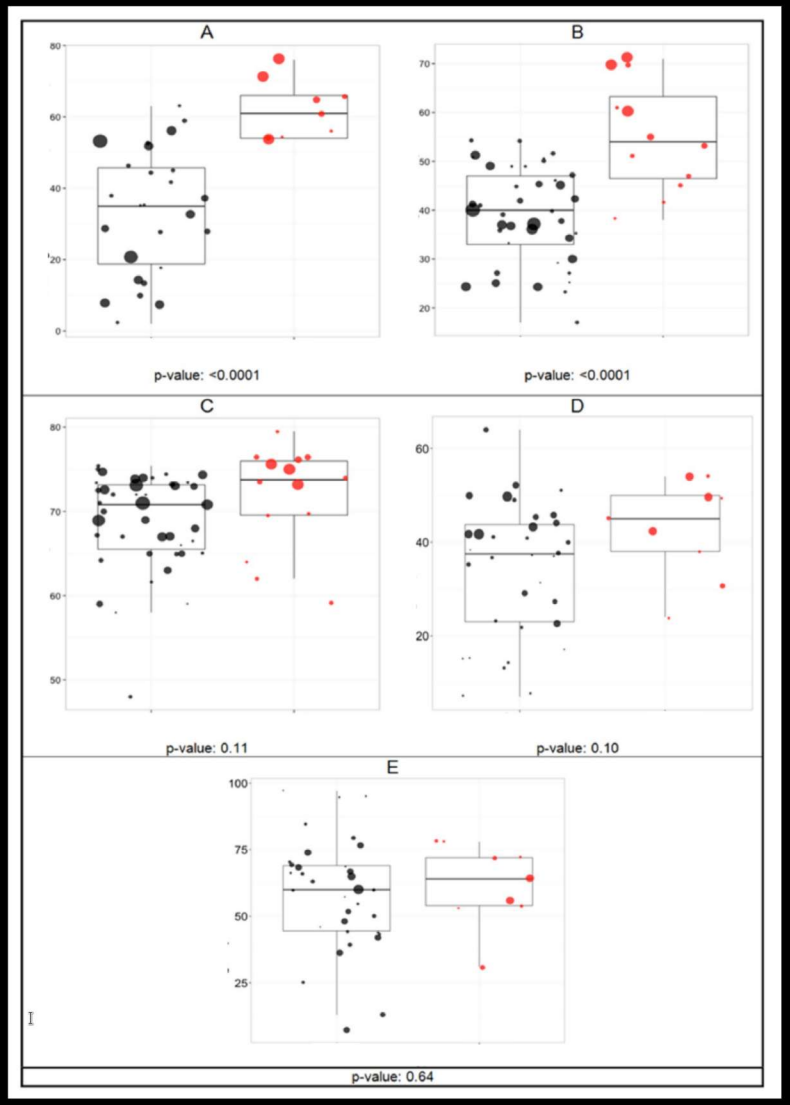
Sinte

Meta analysis - 1

- **Request**: Find a new scientific way to measure effectiveness, efficacy and safety of drugs and medical devices already in the market, without the big cost of the clinical research.
- **Approach**: Using the big amount of data in scientific research from publications (which aren't focused on this scope) and elaborate them with innovative models able to find scientific measurement deduced from the intersection of this apparently inhomogeneous data.
- **Result**: Strong and **scientific results** with a precision comparable with the clinic research one **in less than 1/100 of costs and less than 1/10 of time**.

Sinte

Meta analysis - 2



Sinte