

baobab soluciones

Bringing Academia and Industry closer

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September 7th, 2019

actúaUPM



GIOL
Research Group



Academia



Industry

baobab was born with a mission

Provide **value** to our customers by means of enabling them to make **better decisions** using **Maths** (prescriptive analytics)



GIOL
Reserch Group



Academia



Industry

Rigour
Universality

Agility
Market oriented

About baobab soluciones

- **baobab soluciones** is a spin-off from the Universidad Politécnica de Madrid (UPM), founded in June 2011
- Privately owned, based in Madrid, 22 employees (4 PhD).
 - 90% Engineers and mathematicians.



Pablo Castiella

- Founder
- Quality Telecom
- Jet Multimedia



Dr. Álvaro García PhD

- Founder
- Professor at UPM



Franco Peschiera PhD
Cand.

- Founder
- Leap Game Studios



Rafael Salafranca

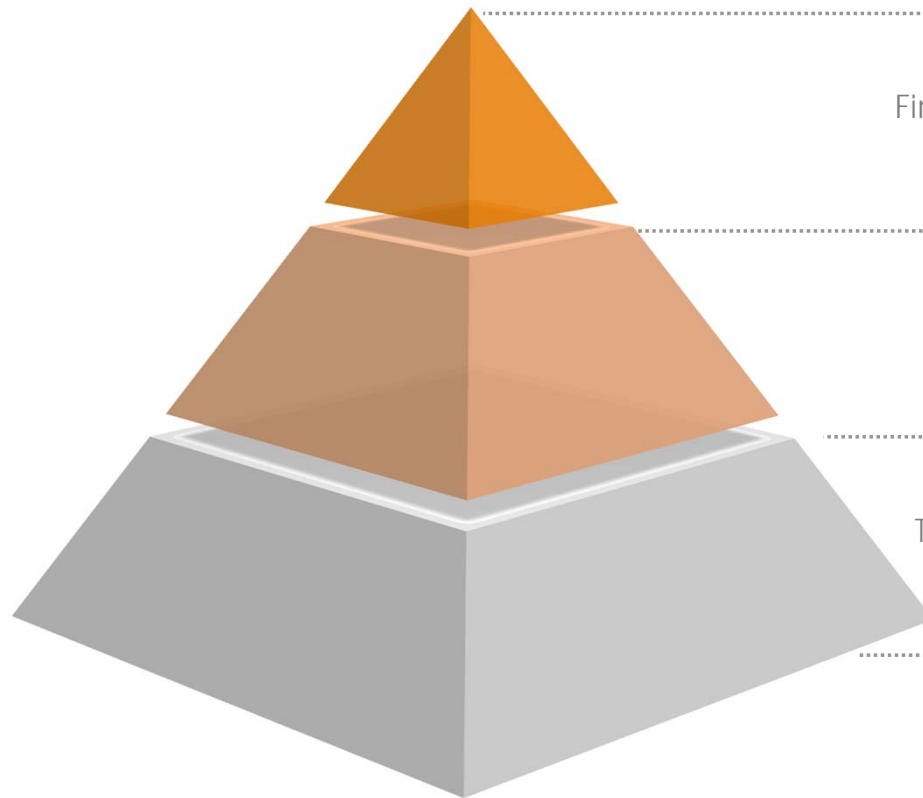
- Chief Projects Officer
- Vodafone
- ONCE



Dr. Miguel Ortega PhD

- Founder
- Professor at UPM
- Head of Department Industrial Engineering

What we do



Optimization

Finding the best solution



Simulation

What-if analysis
Scenario analysis



Data Science

To feed our models the
right data



We develop
applications
integrated with our
customers' systems

Operations Research applied to industrial challenges

State-of-the-art mathematics and the most talented specialists in the field to automate solutions to complex, large-scale problems and assist big industry players with their decision making.

We combine academic **rigor** and business **agility**.



Naturgy

20% reduction in operative and warehouses costs.
Optimal logistics plan for O&M warehouses in Spain, by minimizing transportation costs, stocks costs vs WH costs.



'Components' app
Real Time Stock and Incident Management for the Figueruelas Plant (5 car models in production, 5,000 employees, 400K units delivered per year)



Air Liquide
creative oxygen

Hourly Production planning application
300KEUR-500KEUR savings in power per plant per year



Automatic Production scheduler
15% production cost reduction.
9% on time deliveries improvement.
20% additional capacity.



Simulation of Paris driverless metro system and customer behaviour.



REPSOL

Automatic optimization of long-term and short-term forecasting
Reduction in transportation costs
Last minute orders reduced to zero



GLS
General Logistics Systems

Route and delivery planner
41% reduction in parcel delivery costs

We deliver Customized Solutions

Scoping & High Level Design



Modelling



Verification



Implementation

- Scope is customized to customer's needs.
- Delivered as a custom development or as a service.
- Phased delivery. Typical project duration 2-6 months.
- Deliverables are system agnostic and seamlessly integrated into any customer environment
 - Input from anything.
 - Shared consolidated source databases: SAP, custom databases
 - Output to anything.
 - App, dashboard, KPI, webservice, API, SW Application, *.*
- Results are automated, fast (near real-time), auditable and flexible to changes in inputs.

08/09/2019

Some references



08/09/2019

Win-win collaboration

- Outsourcing
- Actúa UPM programe assistance
- Patent exploitation
- Degree and Master Thesis
- Joint reseach
- Participation in research meetings
- Teal case study

08/09/2019

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The baobab team

THANKS

your invitation

