

Intelligent Agriculture

The Integration, mobility and collaboration challenge

Miguel de Castro Neto

Instituto Superior de Estatística e Gestão de Informação

Universidade Nova de Lisboa

Mega Trends !!!

Mega trends transforming business today



90%

of businesses will be operating in the cloud by 2013*



> 500

million social media members**



4 Exabytes

of unique information in 2011**



Double Digit

budget cuts**

* - Gartner Group

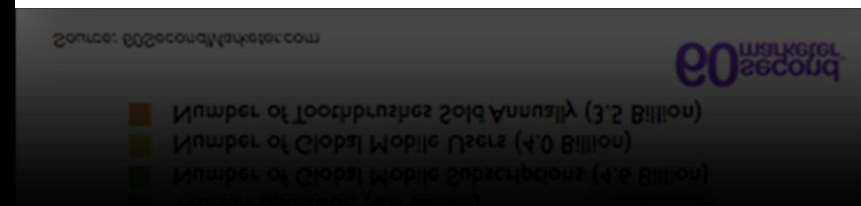
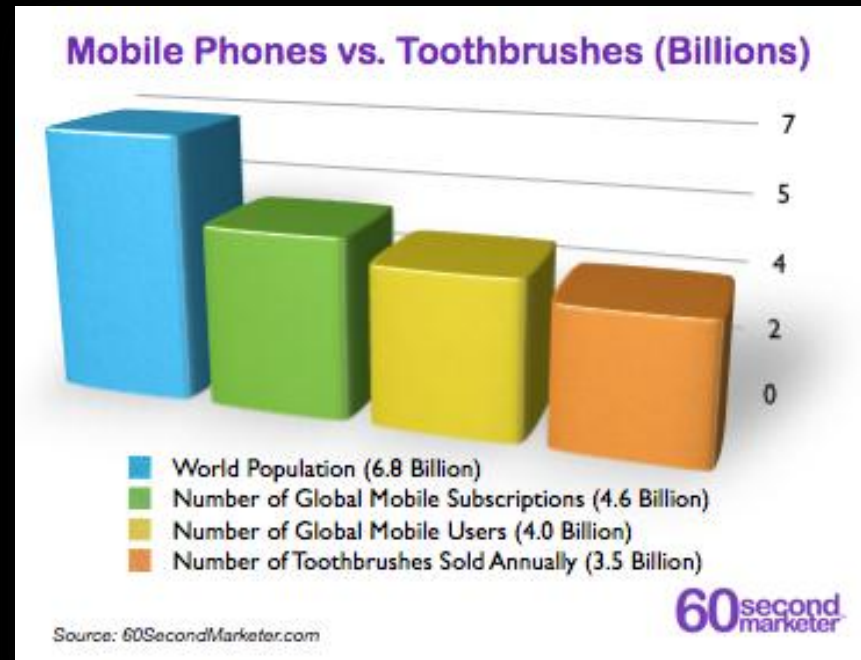
** - <http://www.simplysecurity.com/2011/04/29/forrester-cloud-market-to-hit-240-billion-by-2020/>

Mega trends transforming business today



70%

Of people in China access Internet with a handset*



* - <http://www.simplysecurity.com/2011/04/29/forrester-cloud-market-to-hit-240-billion-by-2020/>

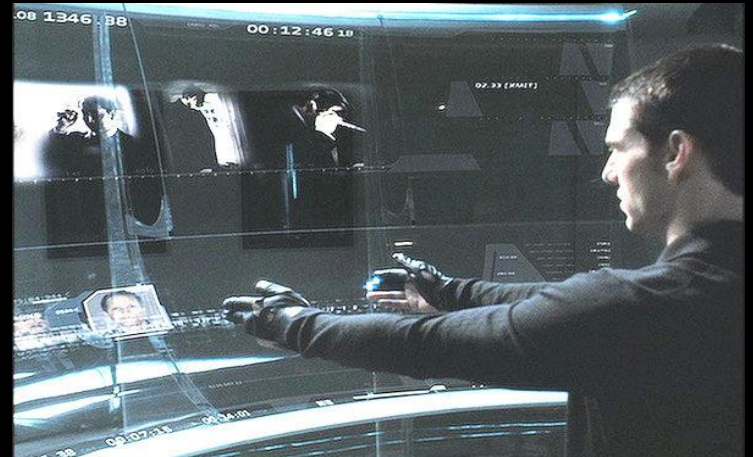
Mega trends transforming business today

THE LEADING QUESTION

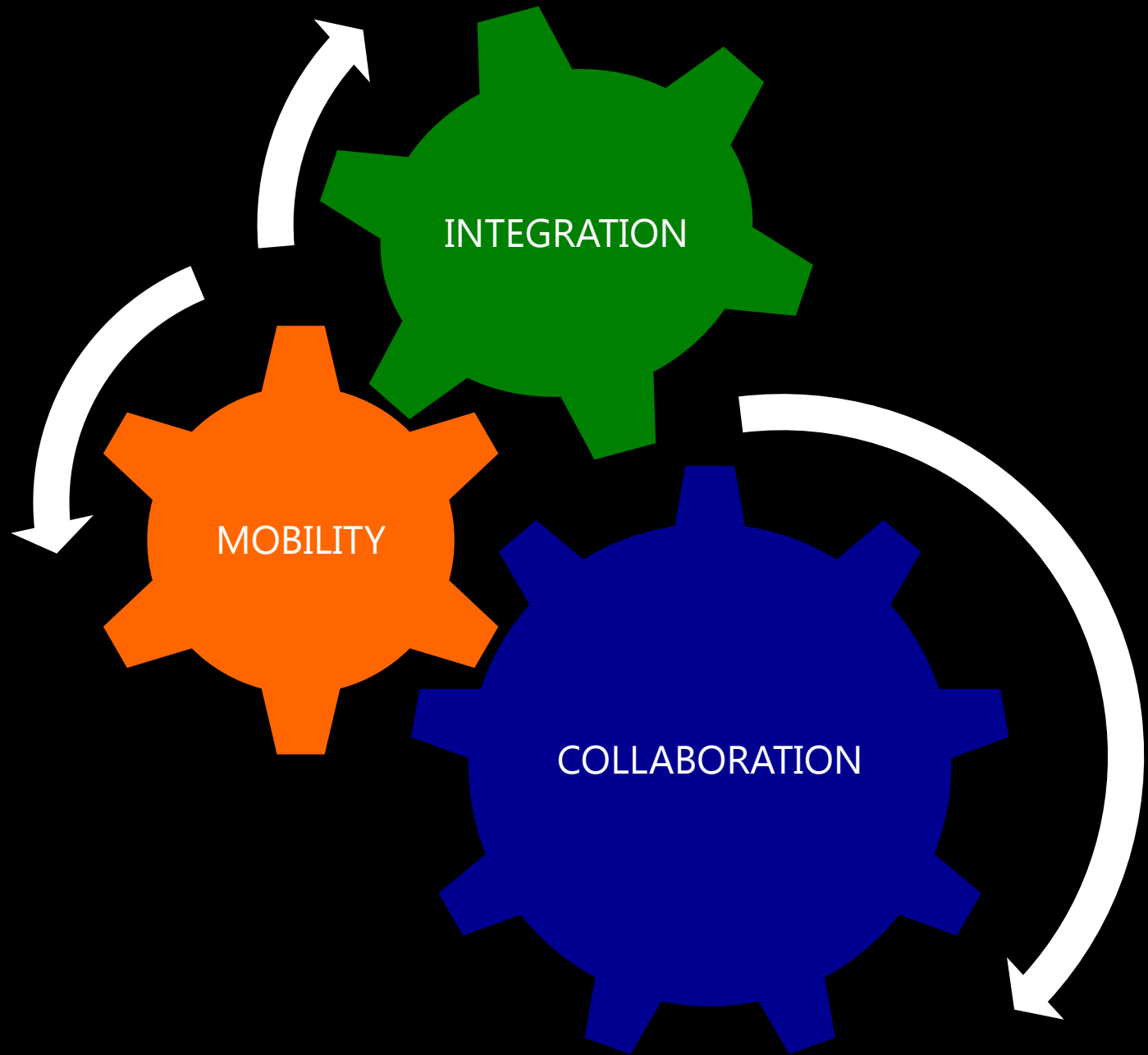
How are organizations using analytics to gain insight and guide action?

FINDINGS:

- **Visualizing data differently will become increasingly valuable**



Back to Agribusiness!!!





INTEGRATION

Intelligent Agriculture

**Farmers / decision makers need the
right information in the right
moment in the right place !!!**

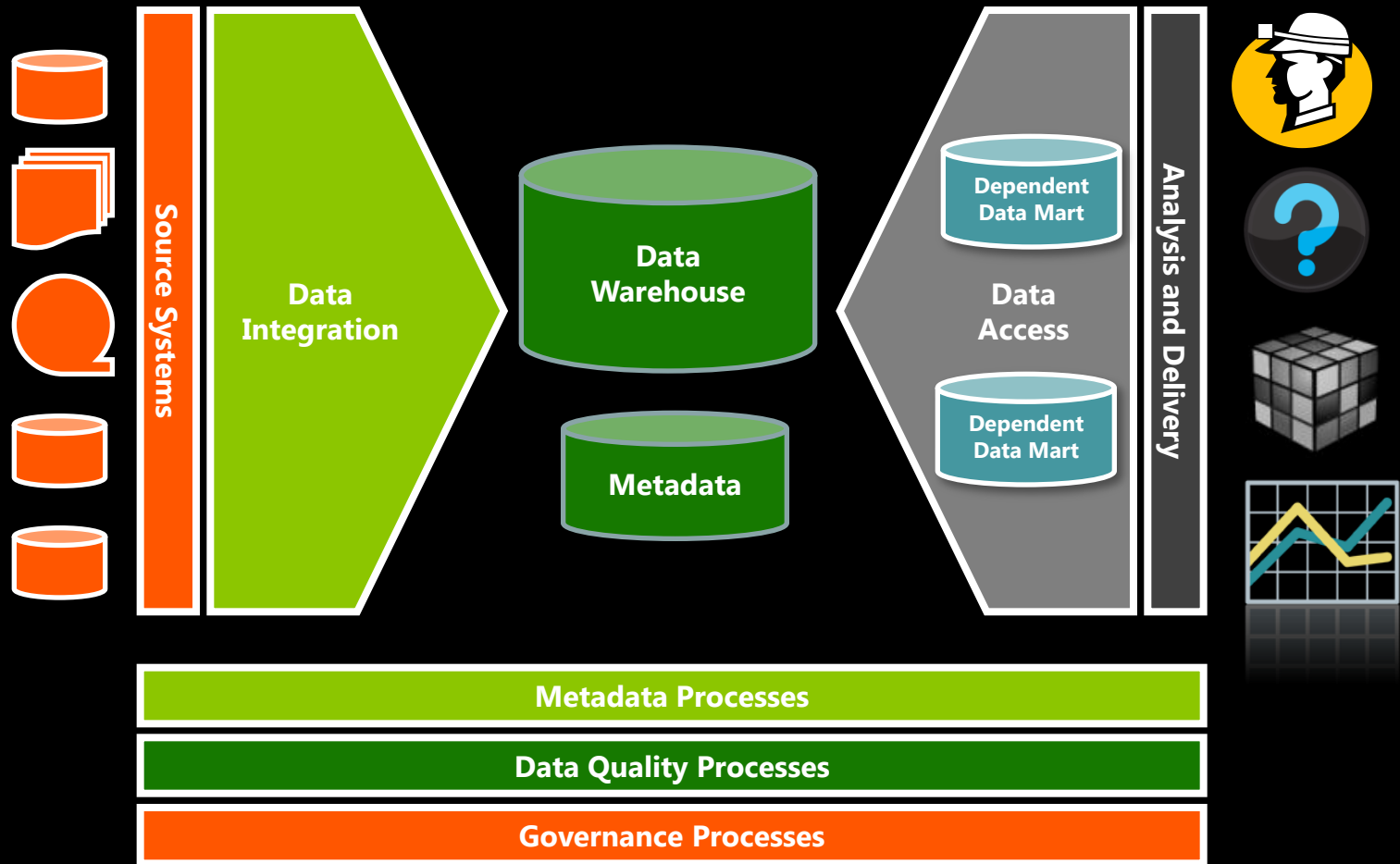


“ Do we have the capacity and the agronomic knowledge to develop the tools to use the huge amounts of data susceptible of being collected in real time and transform it into information ? ”

Business Intelligence (BI)

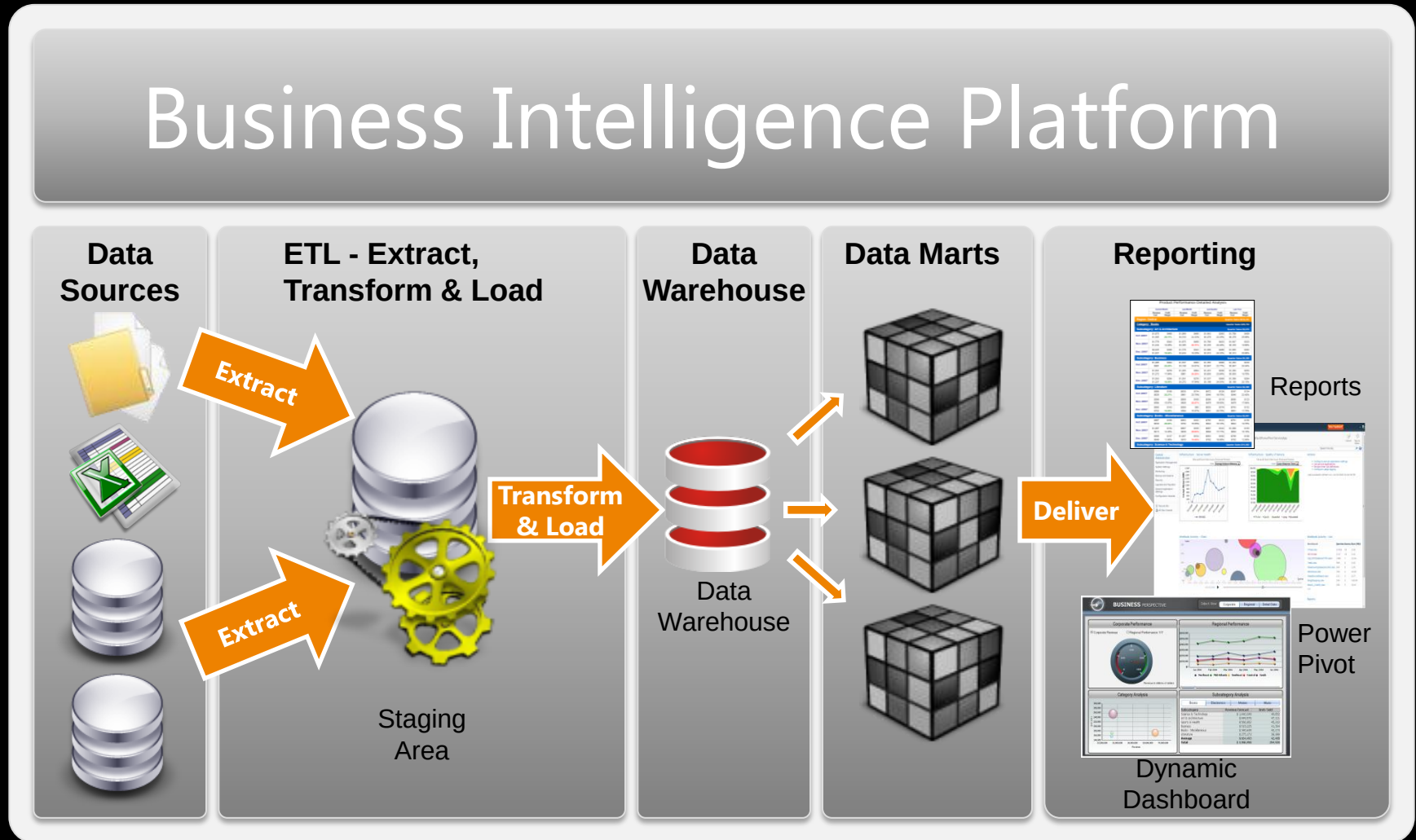
- The process, architecture, technologies and tools that help companies transform their data into accurate, actionable and timely information and disseminate that information across the organization.

A Generic BI Environment



A Generic BI Environment

Business Intelligence Platform



Why BI ?



- What happened?
- What is happening?
- Why did it happen?
- What will happen?
- What do I want to happen?



Past

Present

Future

Data



i-Farm

- Adopting a Business Intelligence approach **i-Farm** delivers to the decision maker a digital dashboard supported by a unique knowledge repository (Data Warehouse) containing information from multiple sources (crop, environment, soil, operations, etc.) enabling accurate and timely decisions supported by on demand analytical processes.

ifarm

www.i-farm.pt

Internet



Câmara Panorâmica



Satélite GPS



Pontos de acesso sem fios



Fitosensores



Câmara Video/Fotográfica



Estação Meteorológica



Servidor Local



Servidor Central

www.i-farm.pt



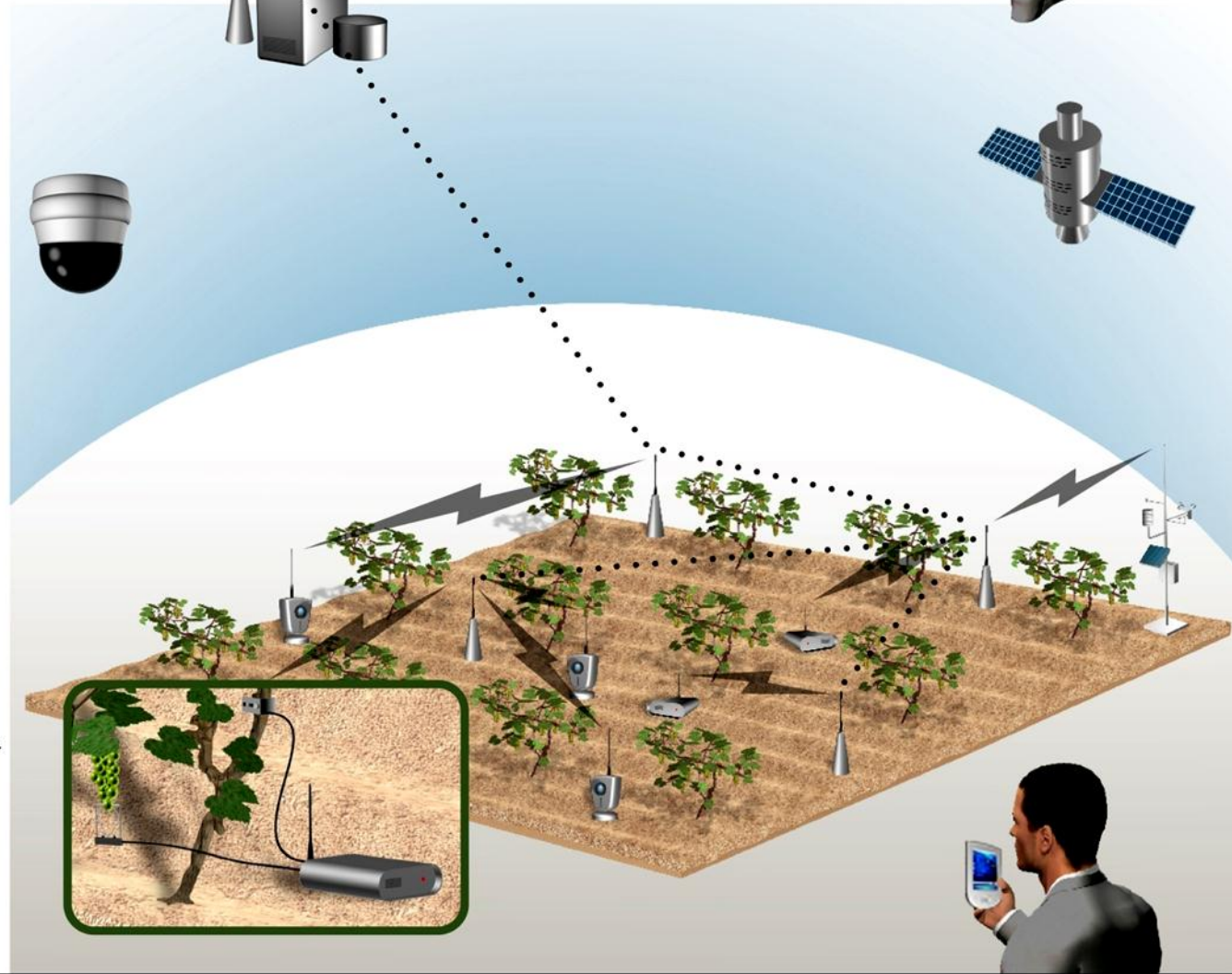
Técnico Empresário Agrícola



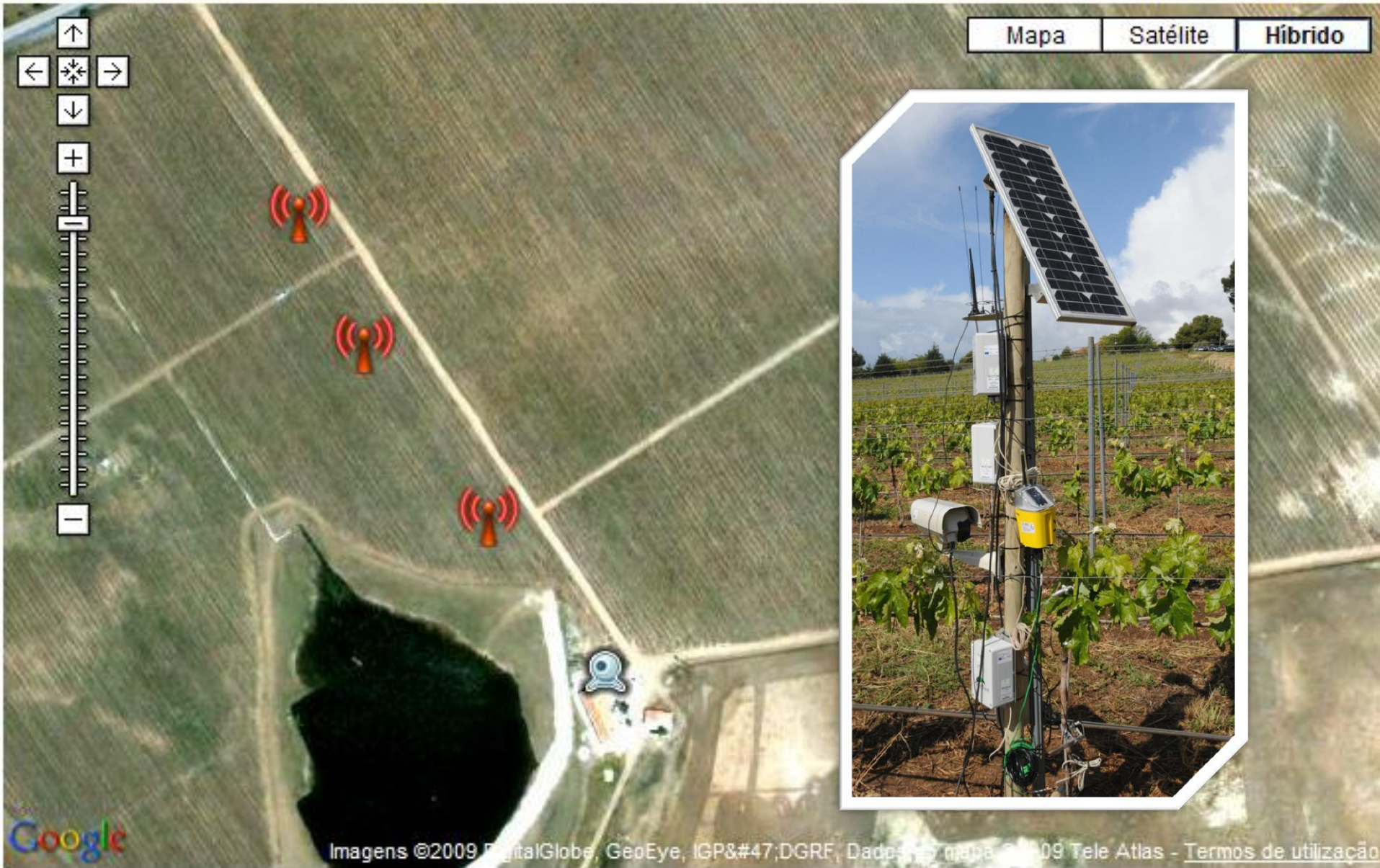
Cliente PDA



Cliente Web



Herdade da Pimenta



Data Sources - *Phyto-sensors example*



Digital Dashboard



Digital Dashboard > Desktop

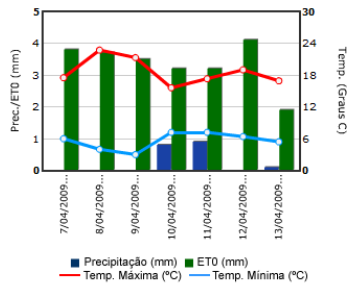


Digital Dashboard

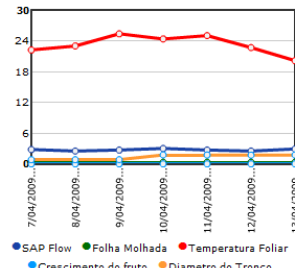
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Ilha 1 | **Ilha 2** | **Ilha 3** | **Câmara Panorâmica**

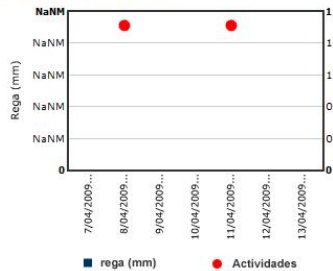
Informação de Contexto



Informação Fitosensores



Informação Operacional



Informação Visual



Digital Dashboard

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Ilha 1 | **Ilha 2** | **Ilha 3** | **Câmara Panorâmica**

Informação Operacional > Agro-Gestão > Aragonez > 31-Janeiro-2008

FACTORES

Actividade: Apl. Herb. Goal
Quantidade: 1,368

MÃO DE OBRA

Tractorista: João
Horas: 4

MÁQUINAS

Equipamento: Tractor Renault - Matricula 08-93-SO
Horas: 4



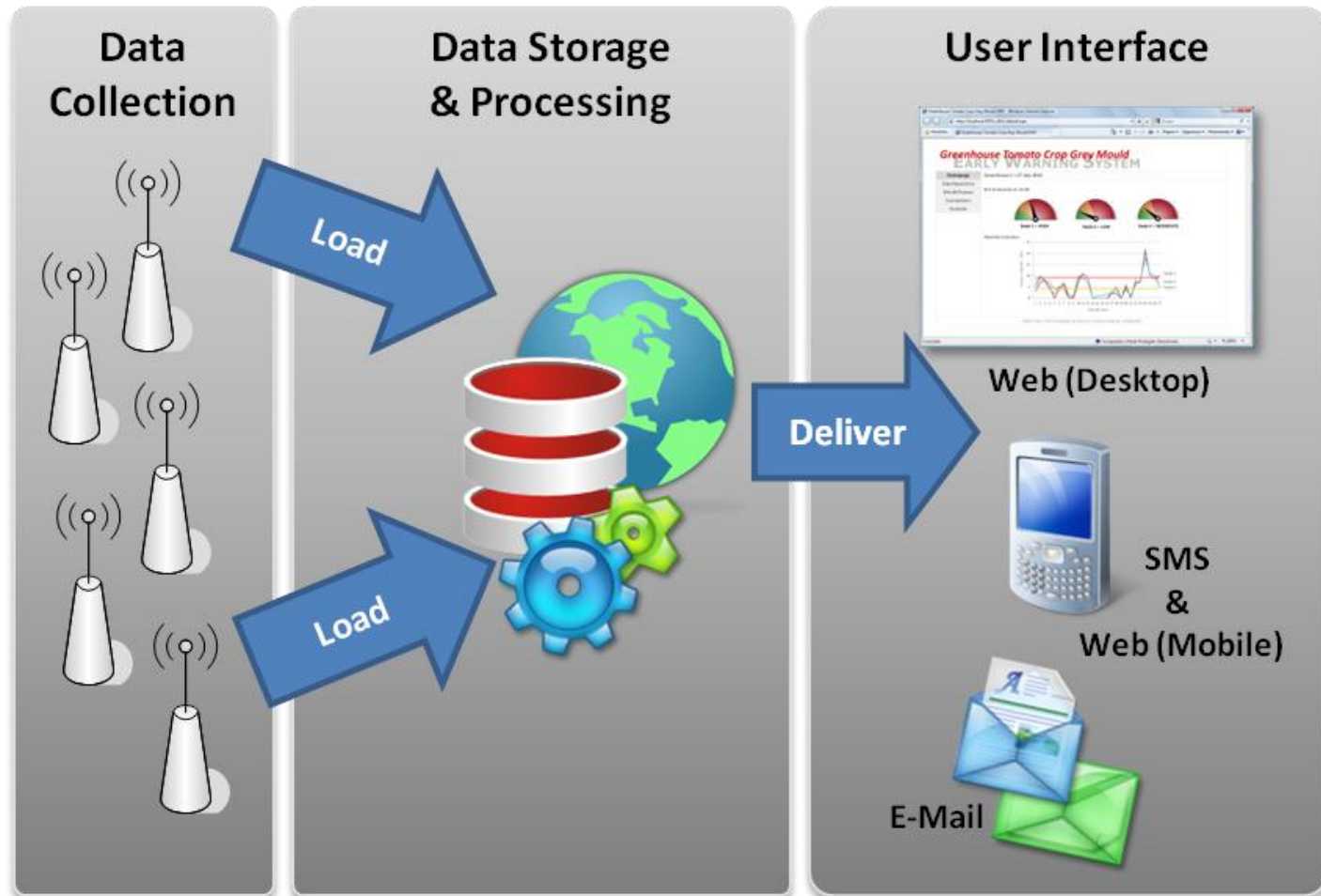
MOBILITY

Project

- To develop an Early Warning System prototype for *B. cinerea* in a *tomato greenhouse* supported by a *wireless network of air relative humidity and temperature sensors* installed inside the greenhouses

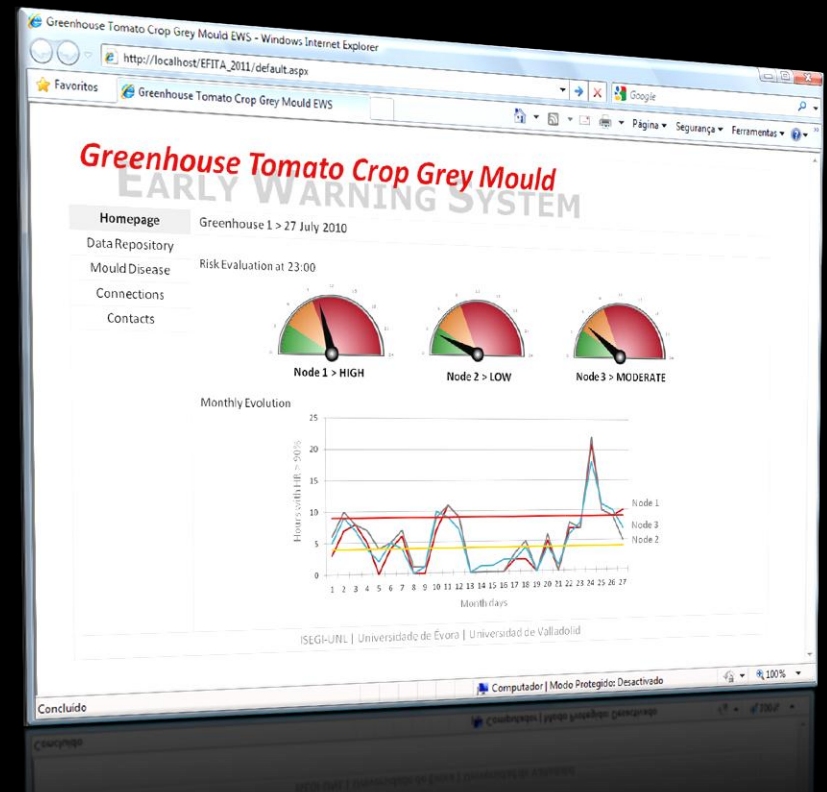


IS Architecture



Information Delivery Challenge

- A dashboard should answer three big questions:
 1. What information ?
 2. For whom ?
 3. How to present it ?

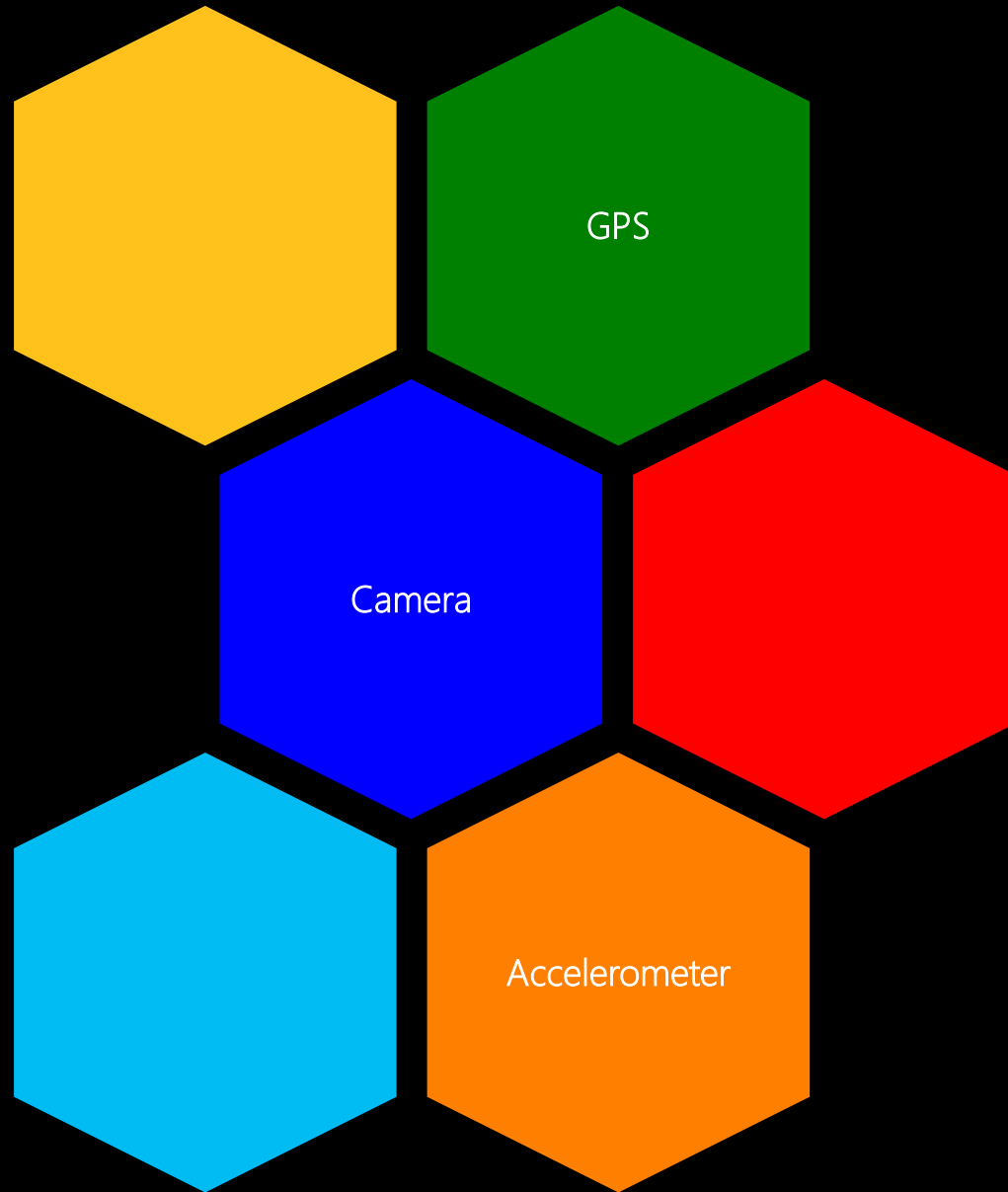


“The fundamental challenge of dashboard design is to display all the required information on a single screen, clearly and without distraction, in a manner that can be assimilated quickly”

Augmented Reality !!!

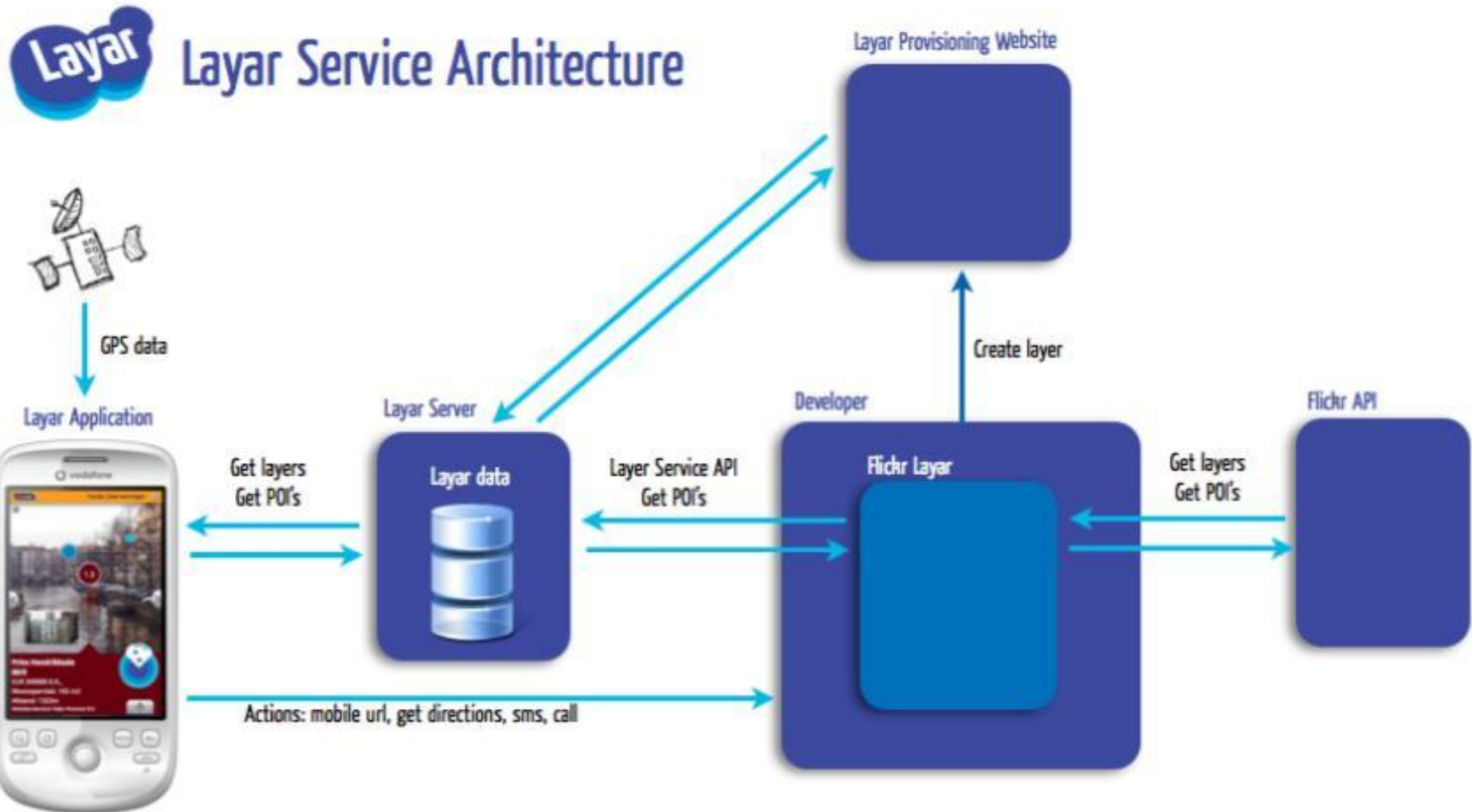


Augmented Reality





Layar architecture



Google Goggles

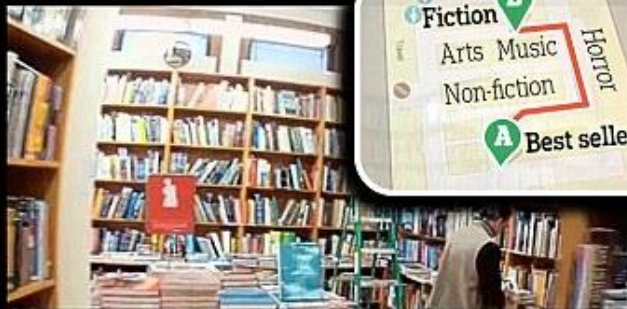
LIFE THROUGH A LENS



- 1** Worth bringing a brolly?
The screen will tell you



- 2** Get travel alerts and alternative routes



- 3** No need to lose your way in shops – you can ask the device how to get to each department



- 4** Friends can keep in touch by text, phone or video



Layar Vision

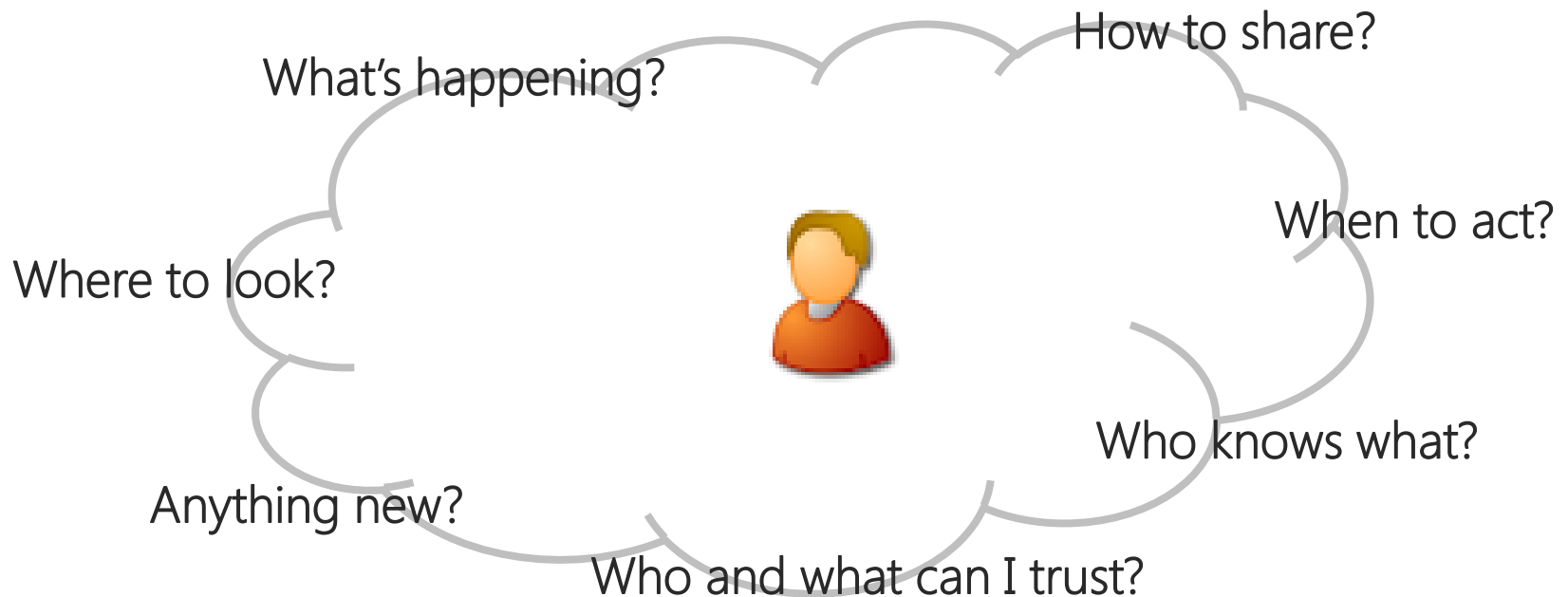




COLLABORATION

The Knowledge Worker

- The typical situation of a knowledge worker



Collective Intelligence

- What is Collective Intelligence
 - Groups of individuals acting collectively in ways that seem intelligent





A word cloud featuring various terms associated with Web 2.0. The words are arranged in a circular pattern, with 'Web 2.0' being the largest and most prominent at the top. Other large words include 'Wiki', 'Blog', and 'YouTube'. Smaller words include 'TagCloud', 'FaceBook', 'Twitter', and 'RSS'. The colors of the words range from dark green to bright orange.

Web 2.0

TagCloud

FaceBook

Wiki

Blog

Twitter

YouTube

RSS

CROWDSOURCING

HortiNET

http://hortinet.info/ — HORTINET

RSS

Google



Hortofrutícolas em Rede: Interagir para Competir

Membros

Pesquisar

Início

Projecto

Actividade

Mediateca

Membros

Grupos

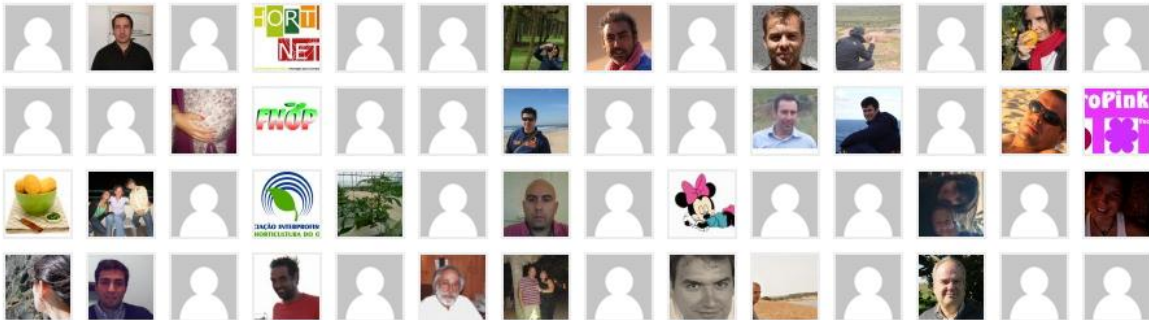
Fóruns

Eventos

Favoritos

Blog

HortiNET – Hortofrutícolas em Rede: Interagir para Competir



Grupos

[Mais recente](#) | [Activo](#) | [Popular](#)



Tuta absoluta em tomate para indústria: monitorização e intervenção

activo 4 horas, 24 minutos atrás



Protecção de Culturas

activo 3 dias, 6 horas atrás

Membros

[Mais recente](#) | [Activo](#) | [Popular](#)



Fátima Alves

activo 4 horas, 24 minutos atrás



David

activo 5 horas, 46 minutos atrás

Por favor [crie uma conta](#) para começar.

Nome de utilizador

Palavra-passe

☐ Lembrar-me

Iniciar sessão

Login with Facebook

Guia de Utilização



Próximo Evento



8º Congresso Mundial da Batata

Local: [Edinburgh, Scotland](#)

WEBSITES CHARACTERIZATION

10 WEBSITES: 21.178 MEMBERS, 461 GROUPS

**BIOLOGOS.BIO - AGRONOMOS – EDUCAMPO DEFESA
AGROPECUÁRIA - LAVOURAS DO BRASIL - BAMBOO -
PLANTE ARVORE - PERMACULTURA REDE TERRA -
MEIO AMBIENTE TERRA BRASILIS.**

SOME RESULTS

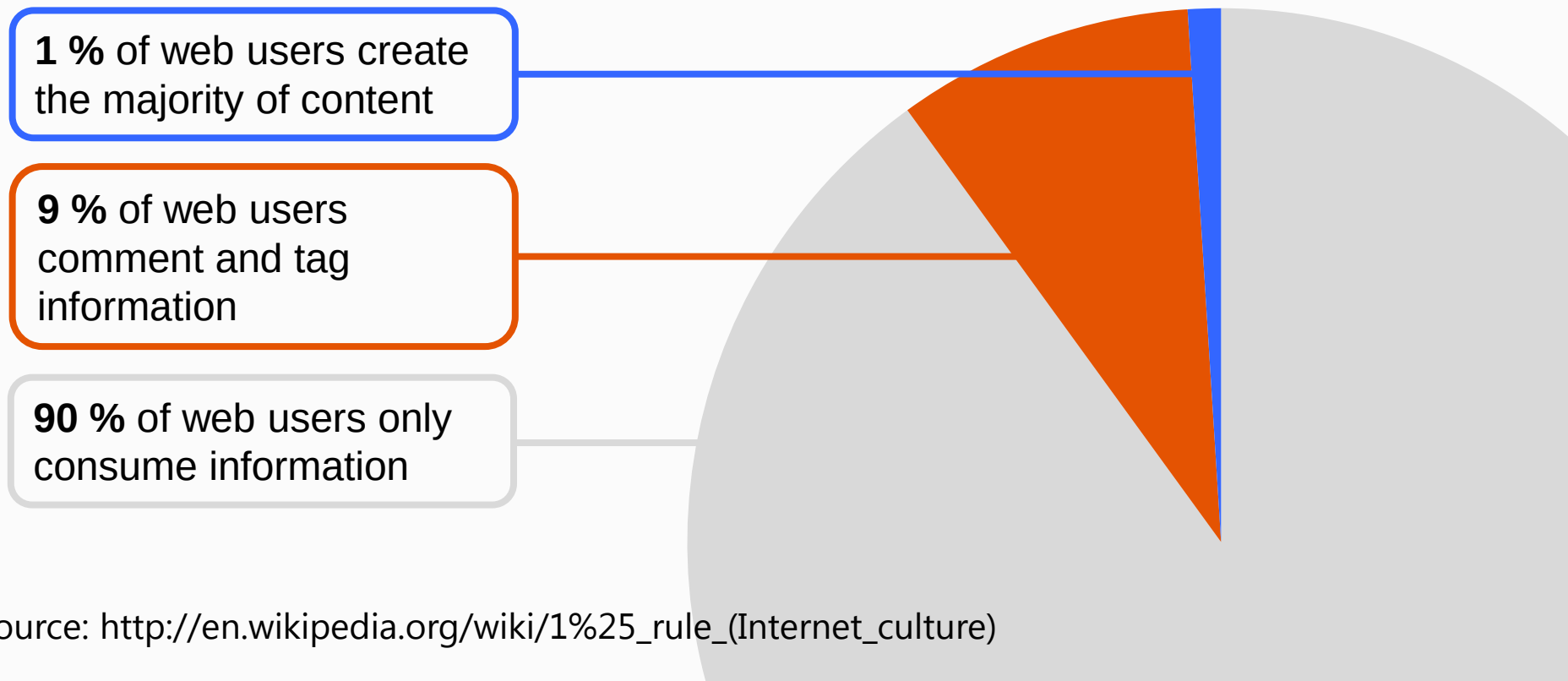
WEBOMETRY

WEBSITE	SIZE	VISIBILITY	IMPACT FACTOR	LUMINOSITY	DENSITY
01 AGRONOMOS	4.420	72	0,017	7.499	10,80
02 BIOLOGOS	6.580	56	0,073	4.195	01,56
03 EDUCAMPO	767	10	0,015	5.066	37,13
04 DEFESA	31.800	5.210	0,163	3.433	00,44
05 LAVOURA	5.390	1.510	0,280	5.864	03,18
06 BAMBOO	8.030	3.020	0,376	12.352	04,31
07 PLANTE ARV.	4.090	1.550	0,235	9.314	05,29
08 PERMACULT	6.750	370	0,054	4.695	01,79
09 REDE TERRA	644	108	0,024	10.780	26,45
10 MEIO AMBIENTE	205	4	0,019	219	91,79

Size Matters !!!

90-9-1 Rule

- "1% of people create content, 9% edit or modify that content, and 90% view the content without contributing"
- Just 1% of all web users create the majority of content



Obrigado

Miguel de Castro Neto

mneto@isegi.unl.pt