



EUSKO JAURLARITZA
GOBIERNO VASCO

GOBIERNO VASCO



EUSKO JAURLARITZA
GOBIERNO VASCO

INGURUMEN, LURRALDE
PLANGINTZA, NEKAZARITZA
ETA ARRANTZA SAILA

DEPARTAMENTO DE MEDIO AMBIENTE,
PLANIFICACION TERRITORIAL,
AGRICULTURA Y PESCA

IKS eeM, Integral Management System for Environmental Information

IT systems – Good example of joint working states to build common systems with benefits for customer, authorities and citizens



IKS-eeM
EUSKADI

EPA's 19th International Emission Inventory Conference, 2010 Sep 27-30
San Antonio, Texas

Mikel Ballesteros, Senior Consultor. IKS eeM System Responsible

- The Need
- The Roadmap
- The solution
- Tendencies and experiences
- Living in the future
- IKS-eeM – EDM integration



- **The Need**
- The Roadmap
- The solution
- Tendencies and experiences
- Living in the future
- IKS-eeM – EDM integration



Why IKS eeM ... ?

Different scientific reports show the **deterioration of the environment** and the pessimistic and even alarmist perspectives (climate change, biodiversity, deforestation, scarce natural resources...).

The society starts a process to raise **public awareness** strongly pressing the political class for adopting **appropriate responses**.

Deploying and adapting ICTs as tools guaranteeing data **quality and interoperability**.

Development of **laws** to inventory, control, and inform on the state of the environment.

Strategies in public and private fields that facilitate the **measurement of sustainability** of a private entity, locality, city, region, country...



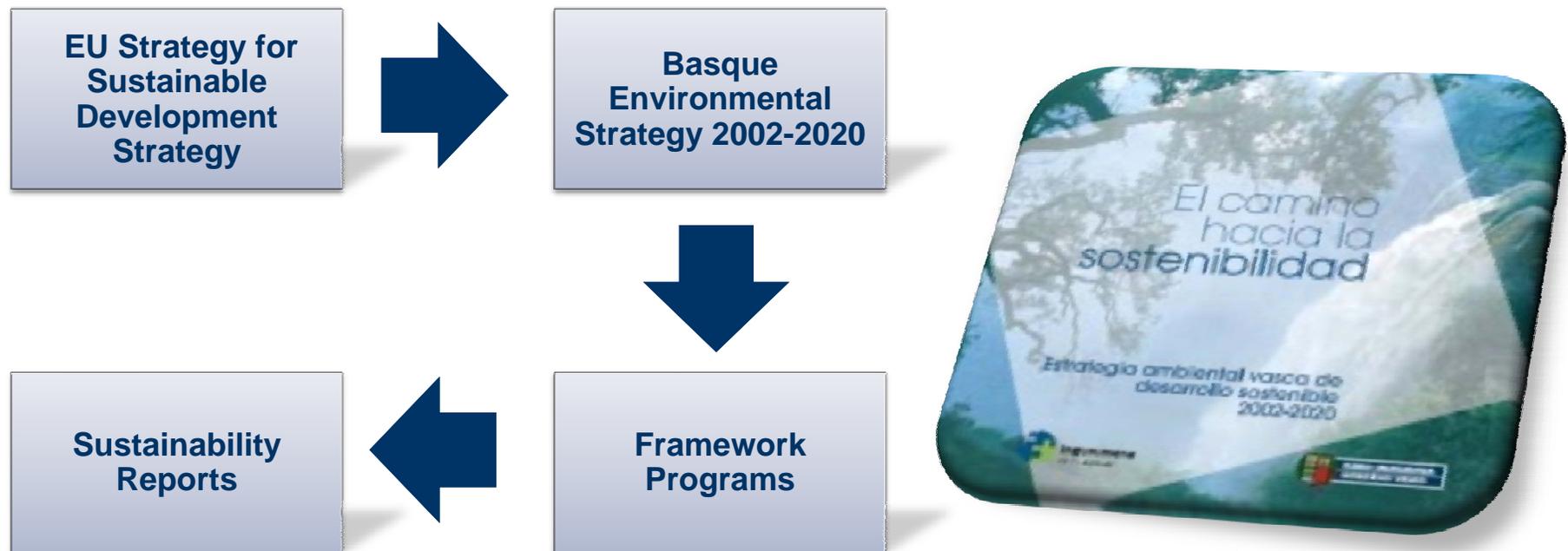
Appropriate policies for our Environment need to be supported by **quality data**.



“..., if one insists on reaching specific goals in a determined time-frame and on monitoring progresses, one needs mechanisms and tools to measure and monitor this progress. Data, statistics, indicators, and information systems will be needed. We can ask ourselves: **what is their origin and how will they be generated?**”

Anne Kerr, Chief, National Information, Strategies and Institutions Branch of the UN Division for Sustainable Development. February 2003

The Basque Country has set an **environmental strategy** in which information technologies are a key component for its development and monitoring.



IKS eeM is aligned with the EAVDS (Basque Environmental Strategy for Sustainable Development) and intends to close the continuous improvement circle of sustainability.



The data should be processed only once (basic principle of SEIS), at the source, where the concept of environmental responsibility lies. It is sent to all agents involved, including Public Administrations, and everything is supported by a legislation that pleads for simplifying administrative procedures.

Law 11/2007 and Development Regulation (Royal Decree 1671/2009)

Royal Decree 4/2010, of 8th January, establishing the National Scheme for Interoperability in Electronic Administration

Law 17/2009 – ‘Umbrella’ Law “Services Directive”

Law 25/2009 – ‘Omnibus’ Law “Services Directive”

- The Need
- **The Roadmap**
- The solution
- Tendencies and experiences
- Living in the future
- IKS-eeM – EDM integration



The Roadmap

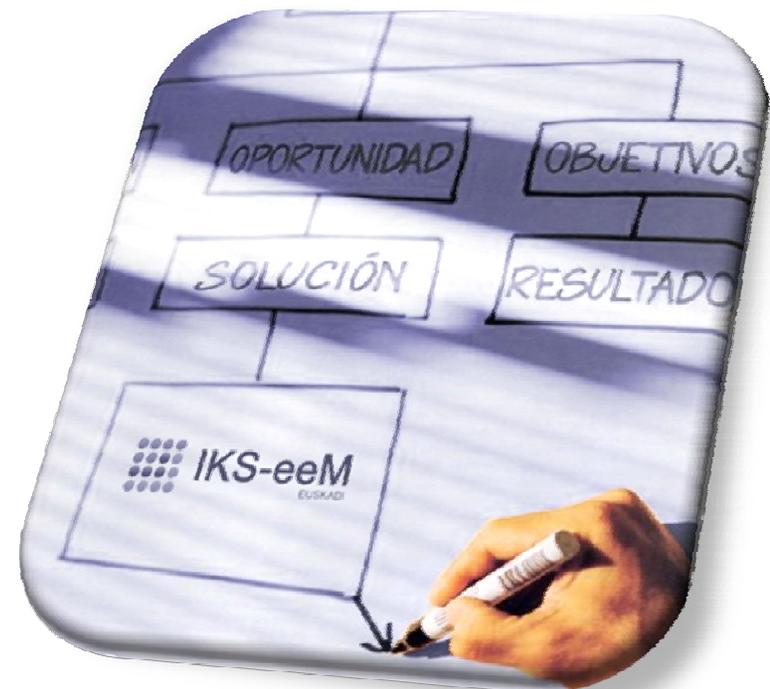
A **roadmap** was set with four work packs and landmarks focused on the introduction of environmental issues in the information society:

Base landmarks

Short-term

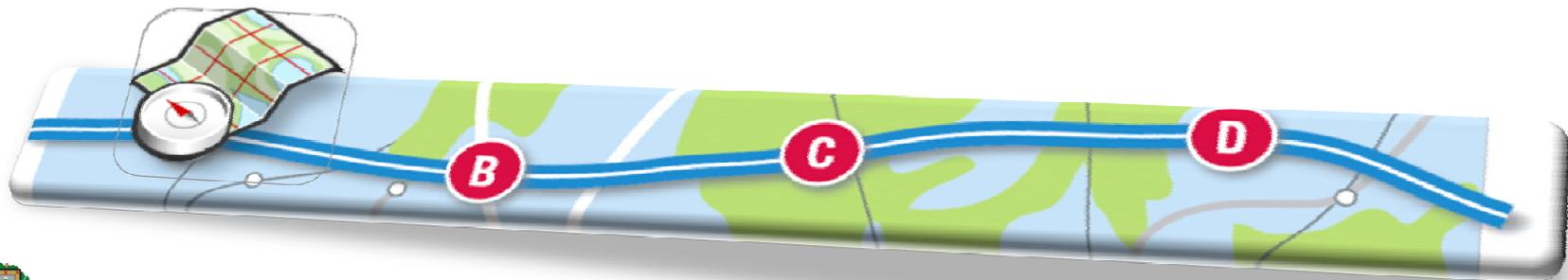
Medium-term

Europe



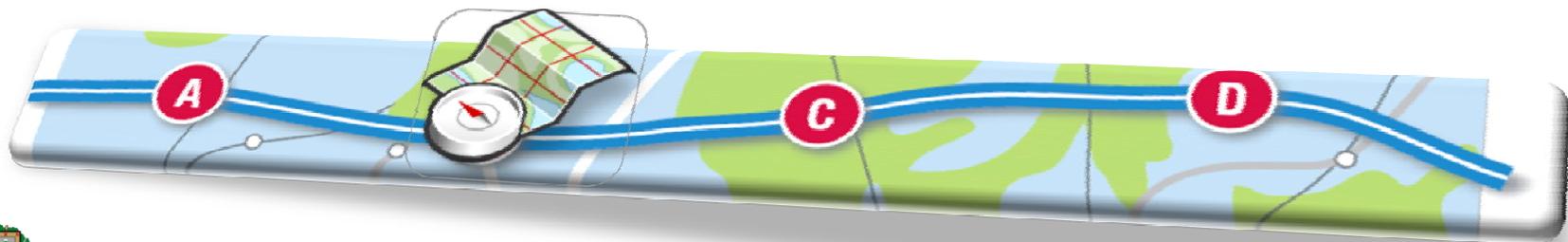
Base landmarks: they correspond to basic landmarks and tasks for subsequent stages landmarks.

- February-March 2009 Training
- March 2009 Implementation
- April 2009 e-DMA
- January 2010 Hazardous waste
- March-April 2010 Training
- January-May 2010 Communication plan



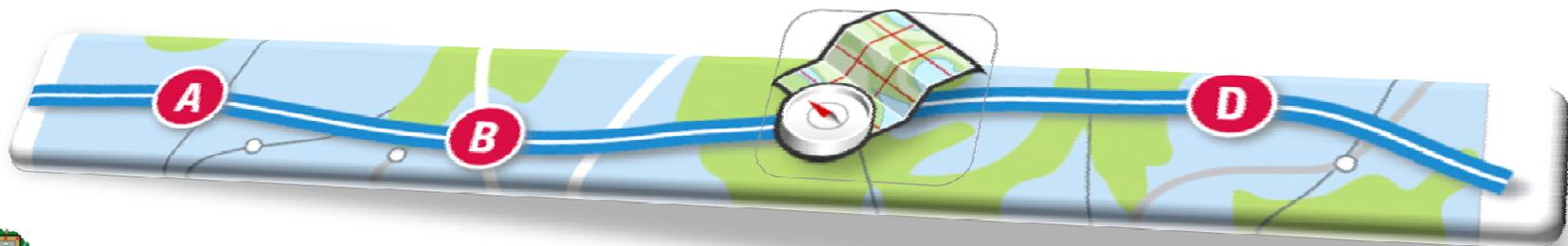
Short-term: they correspond to new services setted up in production during 2010

- **October 2010** Non hazardous waste
- **May 2010** Extension of CAS, 6 new lines and Zuzenean (012)
- Selective training for groups and associations KZ Gunea
- Reinforcement of infrastructures and system monitoring in EJIE (Basque Government Society for Informatics and Communications)
- **October 2010** Activation of Application e-DMA-Simplified electronic-processing of environmental procedures
- **October 2010** Adaptation of 'Omnibus' Law and 'Umbrella' Law (registers)



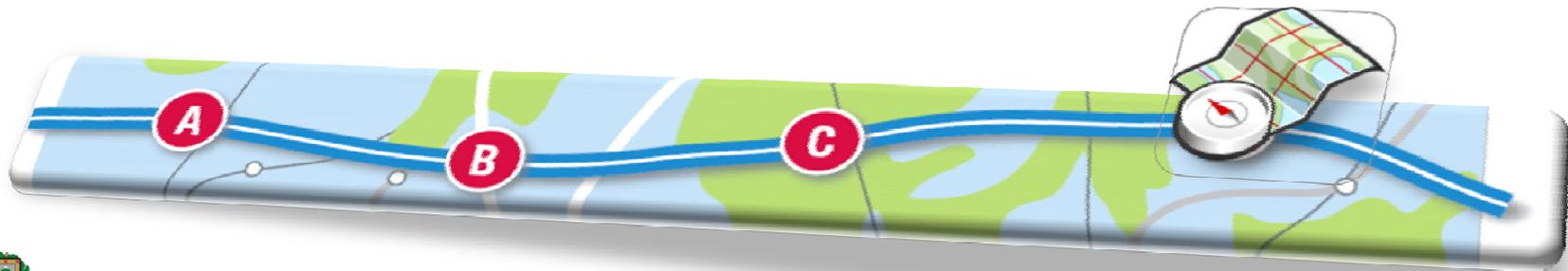
Medium-Short: they correspond to new services setted up in production at the beginning of 2011.

- Activation of communication channels with customer-organizations for the collection and management of improvements and suggestions on the system
- Activation of Web Services for the management of waste information
- Activation of new management functionalities: Management of notices and alerts, Management of environmental profile Reports
- Activation of analytic module
- Activation of emission calculation module



Europe: Services and functionalities derived to Europe.

- **December 2009** Entry into force of Services Directive
- **June 2010** Publication of PRTR data
- **October 2010** Publication of Industrial Emissions Directive
- **December 2010** Publication of Waste Program Law



- The Need
- The Roadmap
- **The solution**
- Tendencies and experiences
- Living in the future
- IKS-eeM – EDM integration



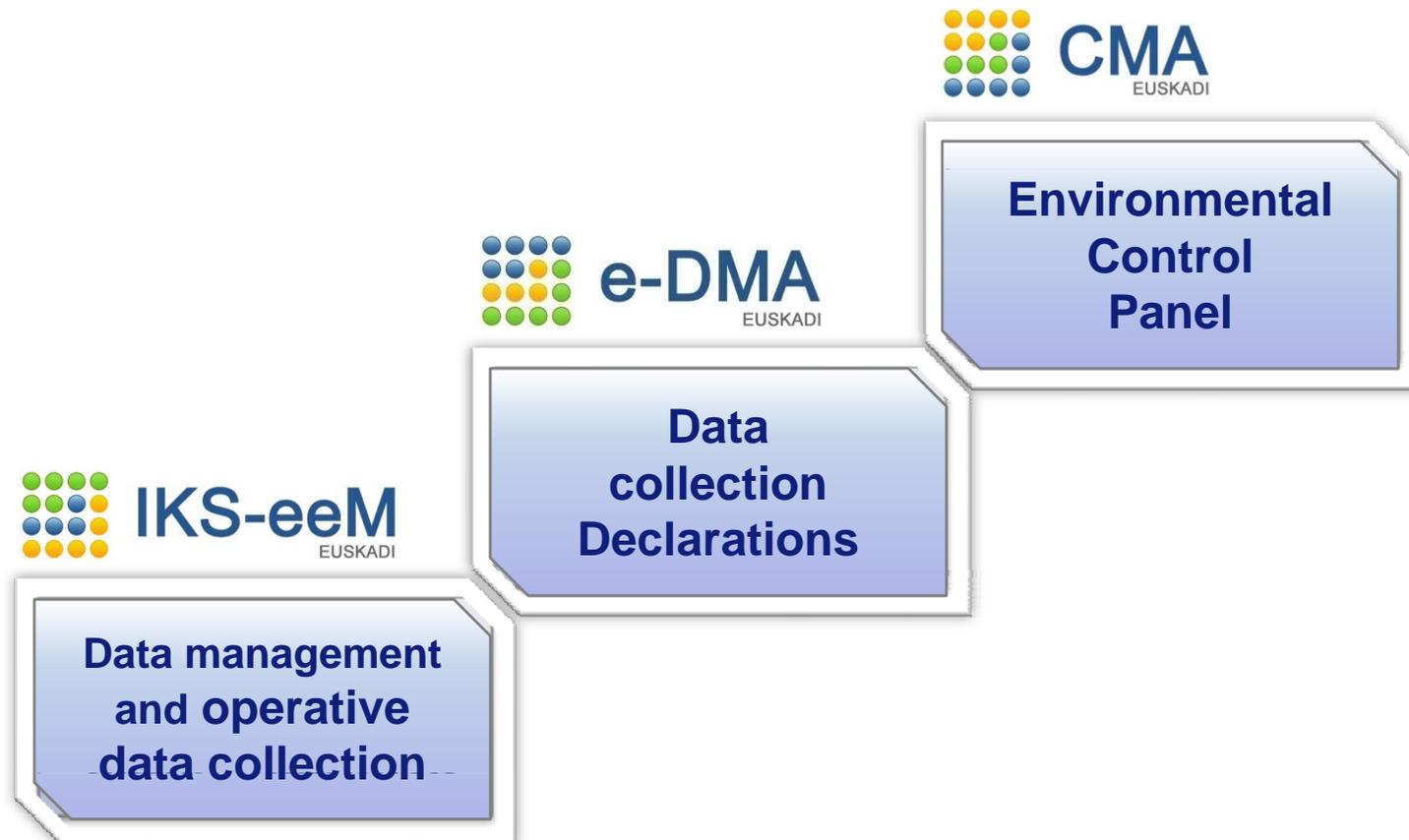
The solution

The main goal of IKS eeM is to be a key element in the model to offer the Basque society: An **OPTC** Administration, which should affect and contribute to improving the control and effectiveness in all levels of competitiveness.



The solution

IKS eeM completes the environmental information **pyramid**, from the configuration of the essential data that support them, their collection, to their diffusion and assessment for making decisions.



International Projection ...

Lisbon Strategy (Services Directive, IDABC Project), Law on Free Access of Citizens to electronic media, INSPIRE, SEIS...

IKS eeM was presented in June 2009 as an example of improvement on environmental laws for the 16 countries taking part in the project **IMPEL Better Regulation of the EC**

The project **IMPEL Common Regulatory Framework Comparison Project** is being presented next June as a case study for the countries taking part in the project.



European Union Network for
the Implementation and Enforcement
of Environmental Law

The solution



IKS eeM was chosen as one of the projects to be exhibited and opened to communication in the Annual Congress of Inventories of the **U.S. Environmental Protection Agency**.

IKS eeM was one of the 24 electronic administration projects submitted by the Basque Government in **Tecnimap 2010**, held in Saragossa from 6th to 9th April.



Administrative safe box: provides companies with a safe electronic container-box in which in one space, online, and with the highest security levels lies all administrative documents and metadata of these mentioned companies.

Business details, management of organizations and operational centers, process: focal points, pollutants (air, water, and soil) and waste bags.

Transactional data, applications, management, declarations, status

Digital signature with interoperable platform for the guarantee of validity of certificate validation (IZENPE)



The solution

The IKS eeM project has articulated the **fight against predictable digital breach and a scarce digital literacy rate** through different training initiatives and the fostering of organizations devoted to support SME and micro-enterprises.

Management
Organizations of
Environmental
Information **EGIA**

Delegated Management
Organizations **EGD**

Agents **AGD**

Training for groups and
associations in
KZGunea centers



The solution

IKS eeM will provide the **Administration** with an environmental control panel for monitoring and compliance of strategic goals and in favor of sustainability and in the fight against climate change.

Development of each of the strategic goals established in the corresponding Framework Program

Comparisons with other regions or countries thanks to the GRI standards established in the Sustainability Reports

Control of the **deviations** to regarding to the established goals

Assessment of the **effect** of policies and developed plans



The solution

IKS eeM will not offer **Basque companies** a simple management tool, but a key element for managing according to their profile, allowing the environmental monitoring of their activities.

Monitoring of the development of each established goal in the company's environmental improvement program

IKS eeM will allow **monitoring** according to standardized procedures that are, at the same time, supported by a solid metadata management

Self-generation of **reports** and **environmental profiles** for companies

Support for making **decisions** in companies



The solution

IKS eeM will contribute to **reducing** most administrative burdens, which will allow an essential **saving** for Basque companies.

Saving on **administrative burdens** when preparing documents

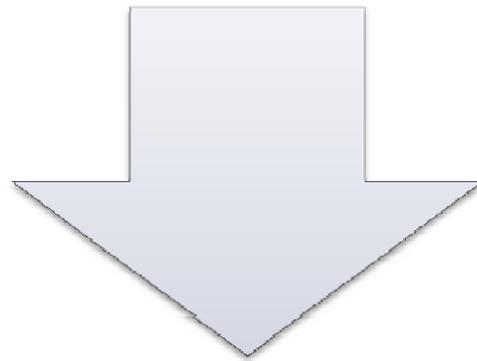
Saving on **paper** costs with its corresponding environmental effects

Saving on **journeys** and telephone calls

Saving on **purchases** and **adaptations** of the ERPs.



Estimation of **2 million** waste shipment operations in the Basque Country, which means for a standard company...

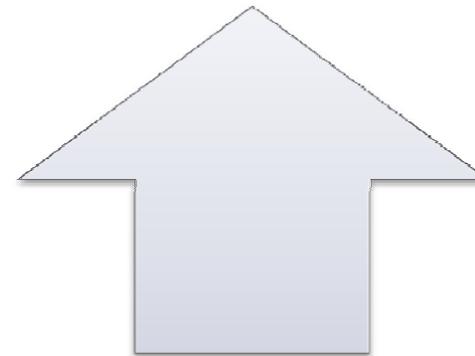


ETER IKS-eeM

- 30/50 seconds per operation
- 1 copy (carrier)
- No surveys
- Automatic declarations and reports
- Automatic record book
- Hours for 1,000 documents: **16**

Paper

- 15 minutes per operation
- 1 paper copies
- Surveys by the National Statistics Institute
- Management of declarations and reports
- Management of record book
- Hours for 1,000 documents: **250**



The solution

The task carried out by the Basque Government at Spanish and European levels in the standardization with the rest of Public Administrations allows IKS eeM to be open for a whole **integration**.

New management model based on **electronic transactions** of information through XML files and interoperable web services.

Design based on **standards** adopted at national and international levels (E3L)



The solution

Integration of all annual environmental reporting obligations of companies through **e-DMA (electronic Environmental Declaration)**

The objective of e-DMA is to cover all the environmental fields related to the environmental impacts of the **Global Reporting Initiative**.

It currently covers **95%** of the factors related to the following issues: Materials, Energy, Water Consumption, Emissions, Releases to Air and Water and Waste.



The solution

This new model shows periodical **self-assessment** and testing actions carried out those interested and by external auditing organizations as an inherent basis to continuous improvement processes.

Before the Data Protection Agency

Audit of the Basque Data Protection Agency

Before the Aarhus Convention

Publication of metadata and environmental information and accessibility of the public information on the INTERNET

Before management excellence

FOAC-Training-Action programs (EUSKALIT) and CAF-Common Assessment Framework (EC)

Before the community of people

Proactivity by prospecting new management models, experience exchange with other administrations, and interaction with interested agents

- The Need
- The Roadmap
- The solution
- **Tendencies and experiences**
- Living in the future
- IKS-eeM – EDM integration



The sceptic ecologist
Bjorn Lomborg, Director
of the Environmental
Assessment Institute of
Denmark and Professor of
Statistics



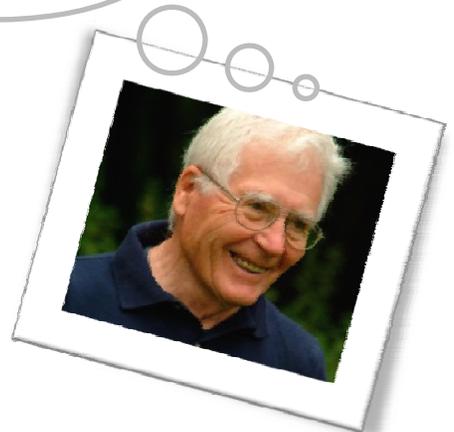
*...it is too late to continue the sustainable
development way; a sustainable retreat is what is
actually necessary*



*Today, the world is getting better, not worse. Energy
resources are not being exhausted, poverty and
hanger are declining, atmospheric pollution is being
reduced.*

The vengeance of the Earth.
The Gaia Hypothesis and the
future of humankind

James Lovelock
Independent scientific,
meteorologist, writer,
inventor, and
environmentalist



There are many reasons to apply a transformation policy in our production patterns and consumption habits ...

The scientific debate is closed. Current climate change is the anthropogenic origin

The '3 twenties' (CO₂, renewable energies, energy efficiency)

The 3 changes: institutions / companies / consumers

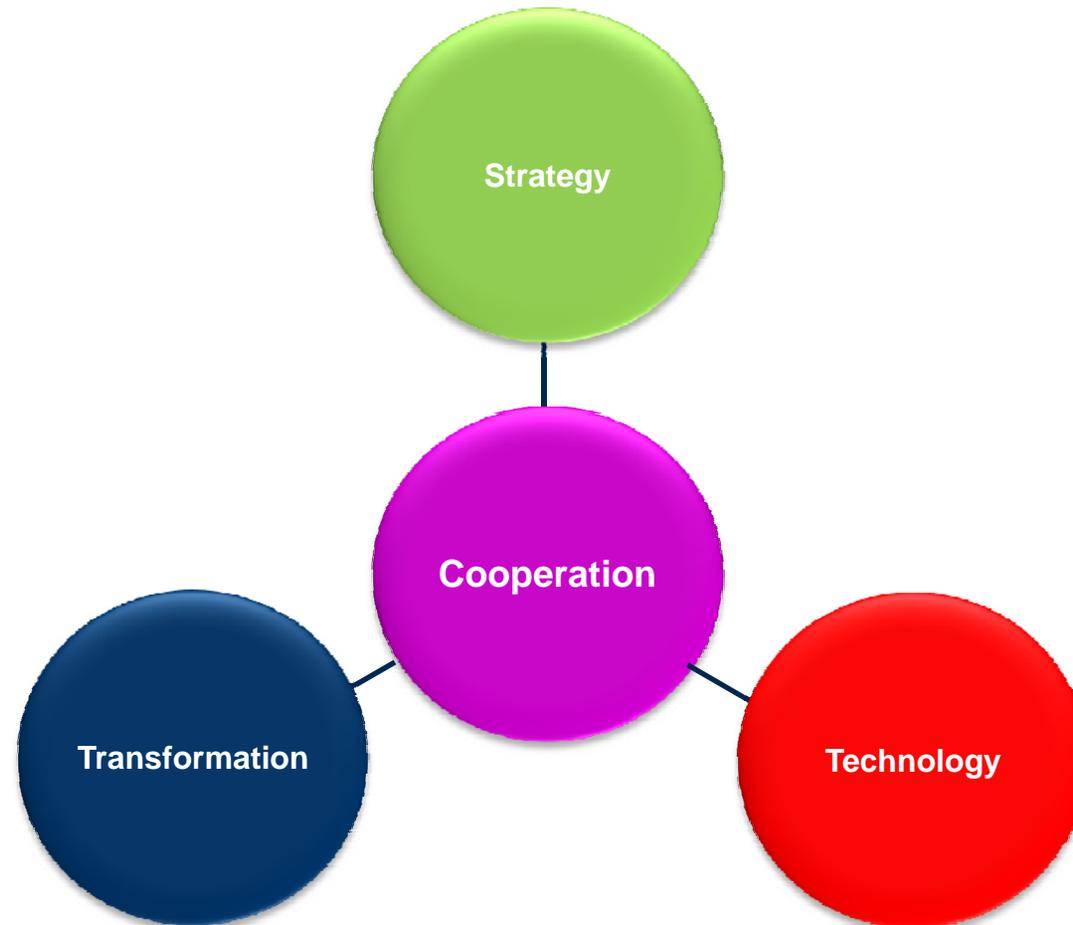
The 3 keys: sustainability, cooperation, innovation

Being ahead of legislation and obligations

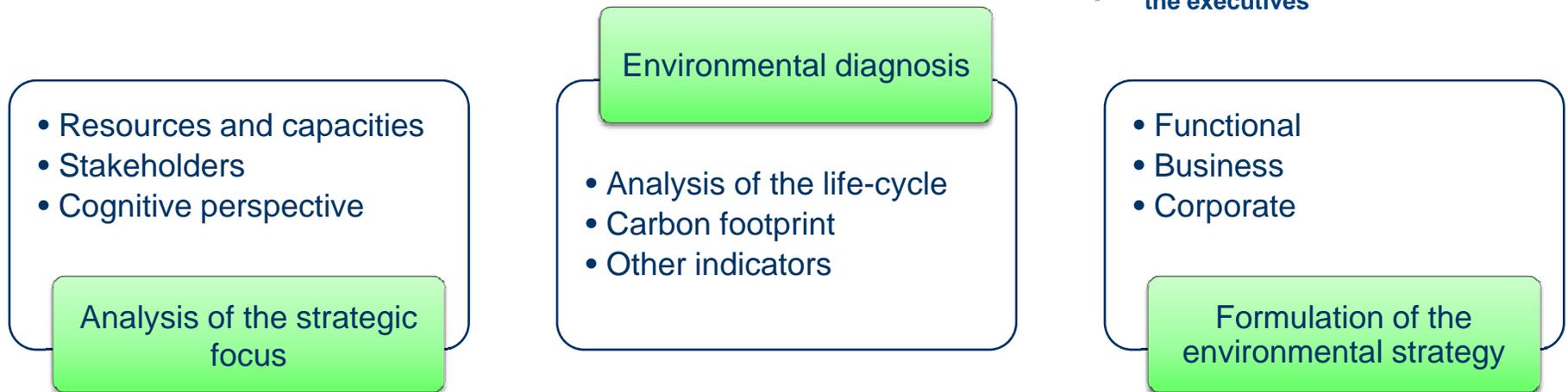
More image, competitiveness... am I in the market?

Environmental and social responsibility

At the moment of facing environmental challenges, we can say that organizations have **four keys** that are inter-connected...



What **environmental strategy** should an organization follow?



Depending on the strategy, the next step is to **transform** the organization environmentally...

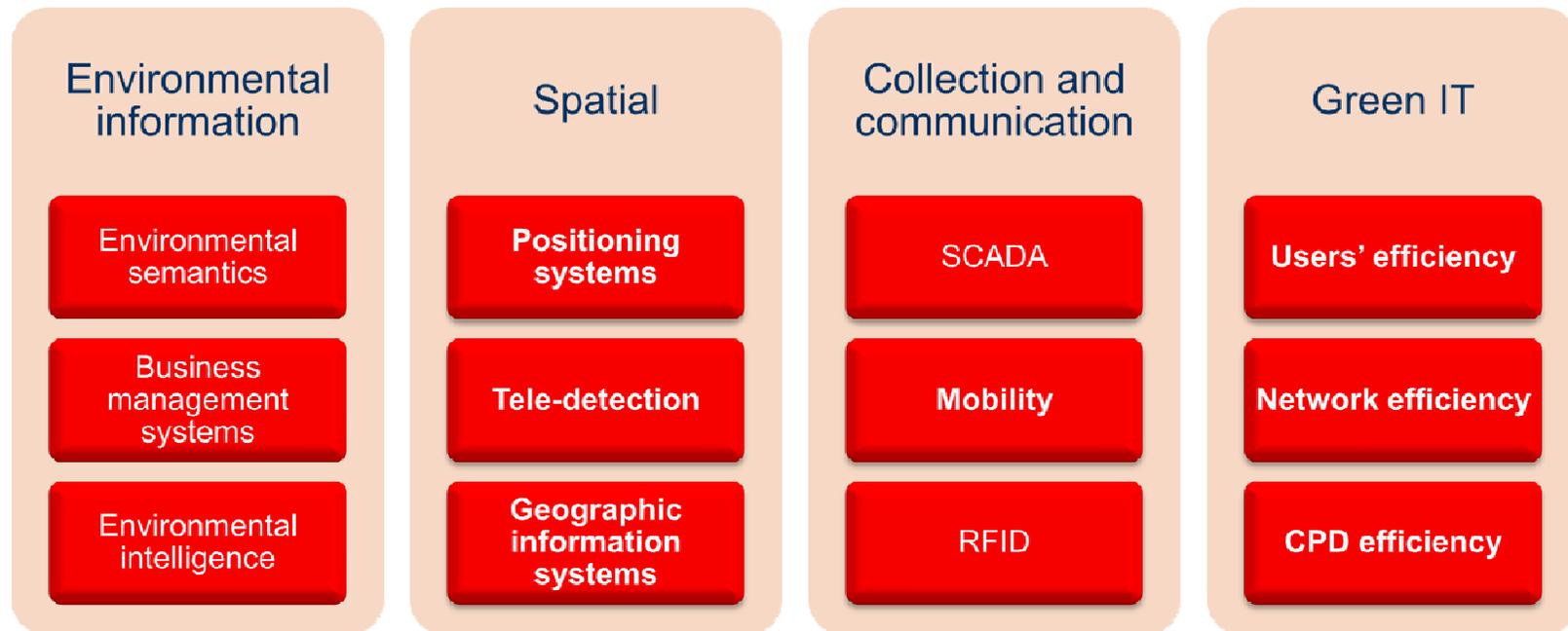


Global challenges need global responses ... environmental **cooperation** within an organization and between different organizations is essential



Tendencies

Support of **new technologies** to develop efficiently transformation programs.

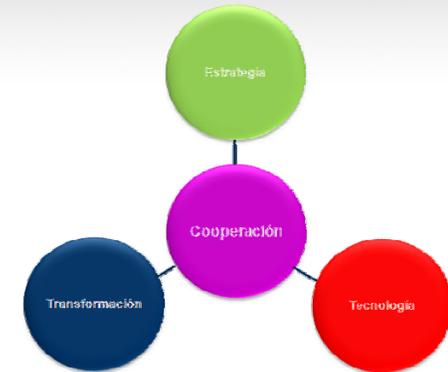


ETER, Electronic Standardization of Environmental Data

Achieve data and process **harmonization** in the information systems of Public Administrations regarding the environment

Improve feasibility and **quality of statistic data** on production, transport and industrial waste management in Spain. Interoperable at European Statistic Level

Facilitate **environmental policies** at European, national and autonomous levels based on data as real as possible



<http://www.eterproject.org>

“WHAT IS YOUR THINKING?”



THE CIE AUTOMOTIVE GROUP



Business Unit: **Automotive**

Global provider of integral services of components and sub-assemblies for automation



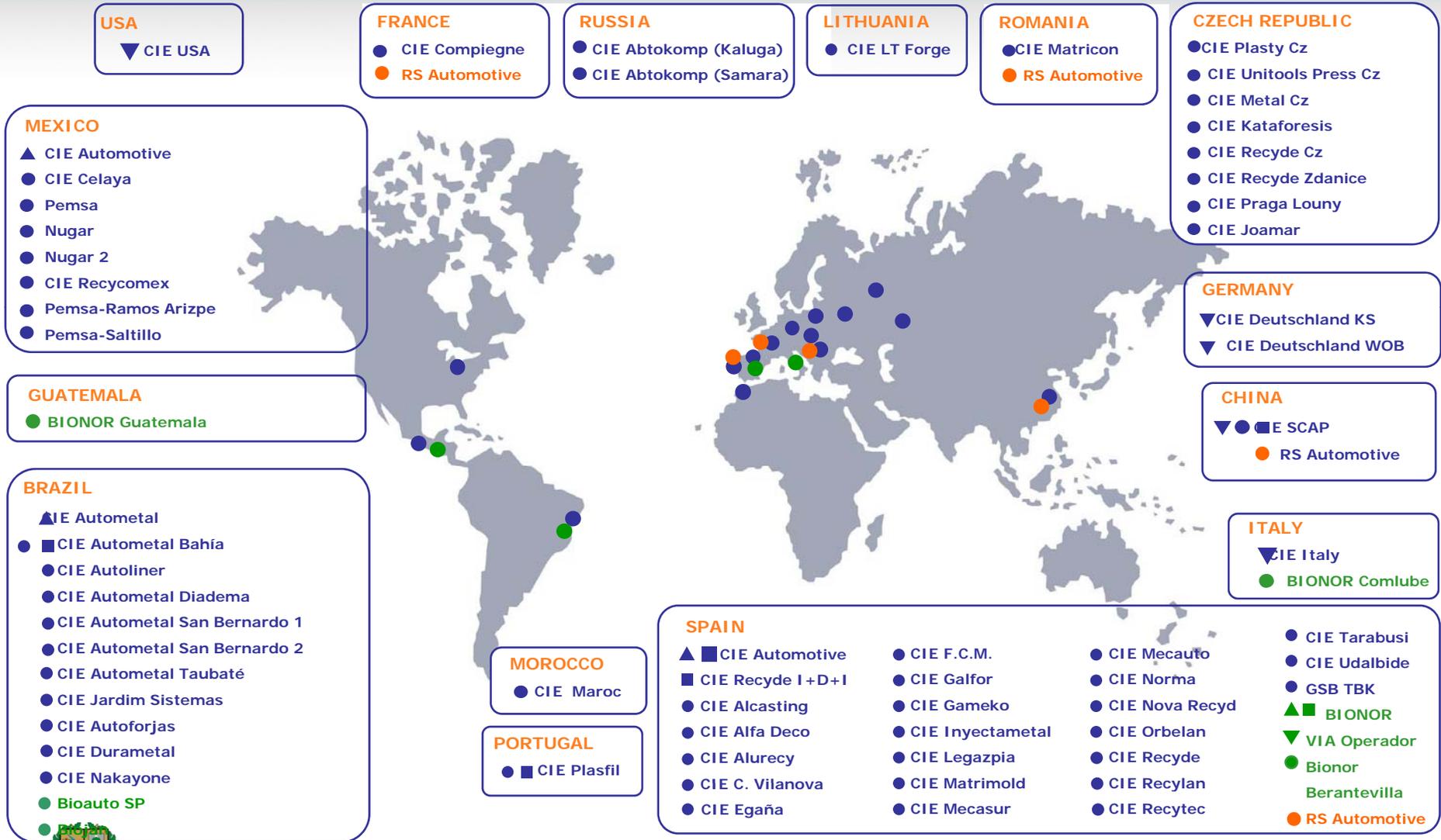
Business Unit: **Bio-fuels**

Devoted to the production and distribution of bio-diesel

1.2. GLOBALIZATION

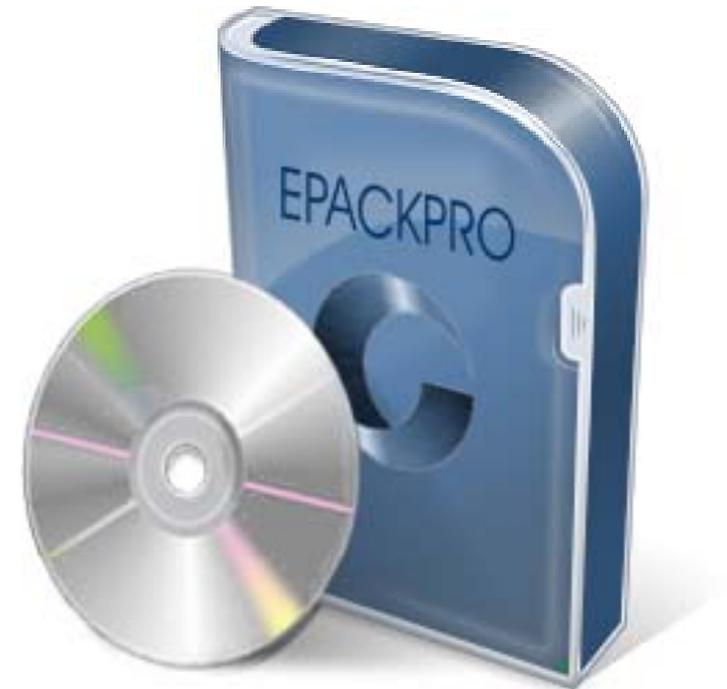


64 PLANTS LOCATED IN EUROPE, AMERICA, ASIA, AND AFRICA

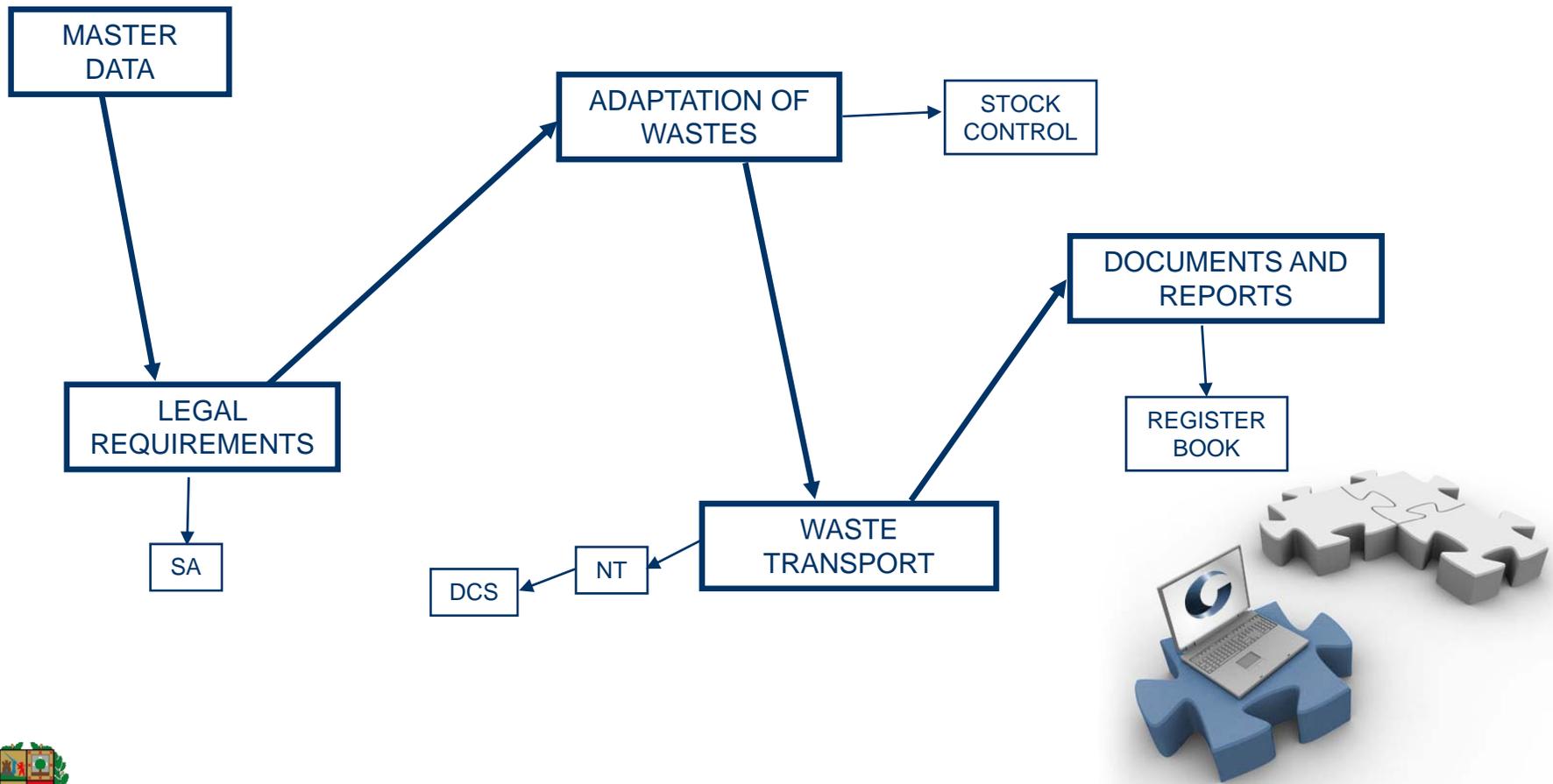


▲ Headquarters ▼ Technical Commercial Office ■ Technology Centre ● CIE Automotive plant ● RS Automotive plant ● Bio-diesel

INTRODUCTION TO THE WASTE MANAGEMENT SOFTWARE (EPACKPRO)



It is environmental management software in SAP.



BENEFITS OF INTEGRATING ENVIRONMENTAL MANAGEMENT IN THE ERP.



INTEGRATION:

From the purchase an sale point of view



Suppliers

Purchase of chemical products



Production process

Waste generation



Waste

Waste Management



CIE AUTOMOTIVE
recycles 50% of
some waste.

BENEFITS OF INTEGRATION

More efficient cost analysis directly in our ERP.

Consumption analysis of purchased products: per process, per centre, per division, .., etc.

Analysis of waste generated per production process



STANDARDIZATION

All CIE AUTOMOTIVE centers in Spain work in a unique way:

BENEFITS OF STANDARDIZATION

A single and reduced
CIE AUTOMOTIVE
supplier panel.

Use of scale
economies.

Increase of efficiency in
the centers' operational
model.



↑ SOCIAL/ENVIRONMENTAL RESPONSIBILITY

A Commitment to environmental management.

A Increase of corporate responsibility.





CONTROL



ENVIRONMENTAL RISK

Focus on our sustainable
development

Decrease of environmental
responsibility cost





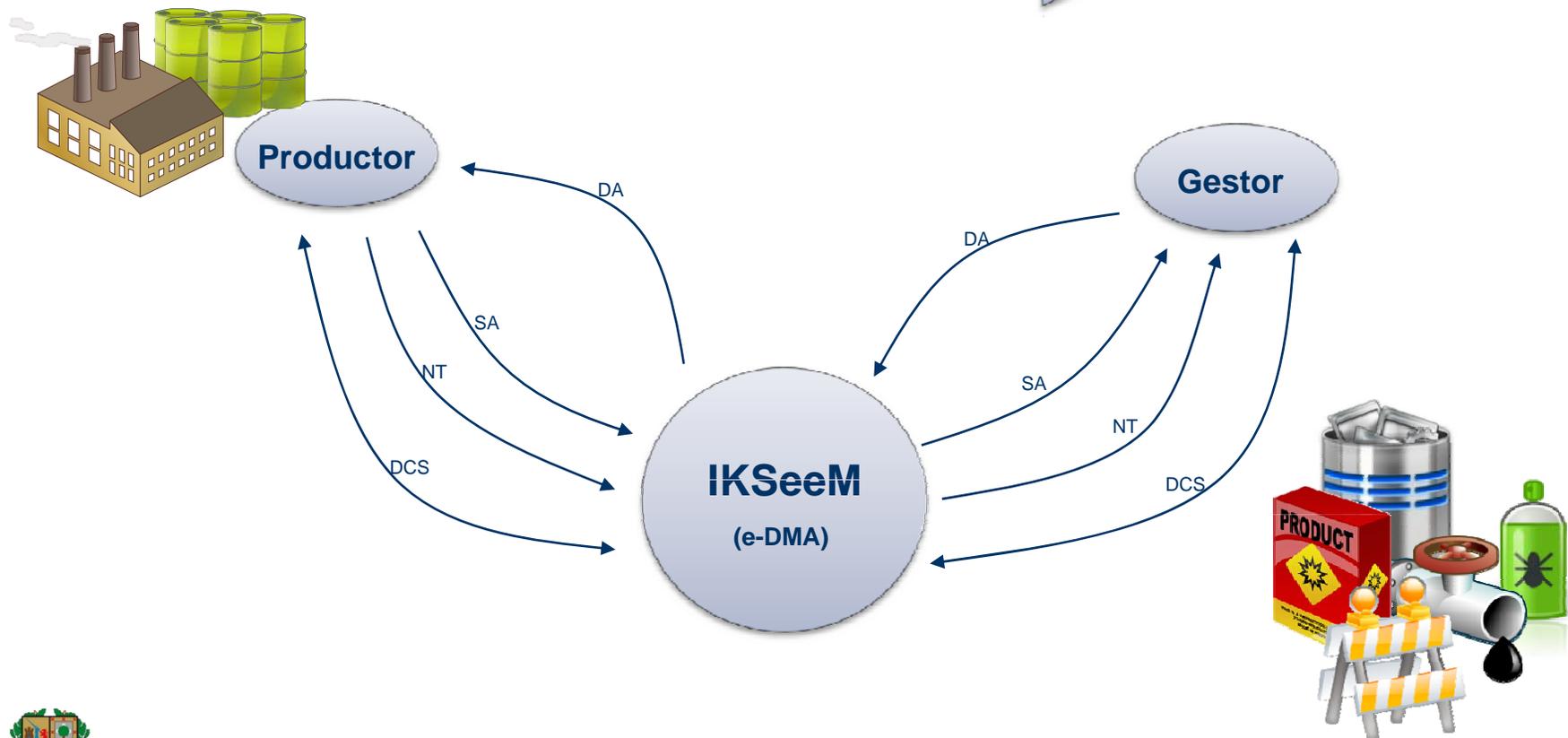
INTEROPERABILITY ERP-IKSeeM

ePACK CONNECT

ePACK PRO



IKS eeM



BENEFITS

Elimination of paper
increase in productivity.

Unique and more efficient
management

Unique database and
responsibility of generated
data

The administration goes from
being a “bottleneck” to be a
process facilitator

The e-DMA goes from being a report of the annual
management, to an online report and a part of the
process

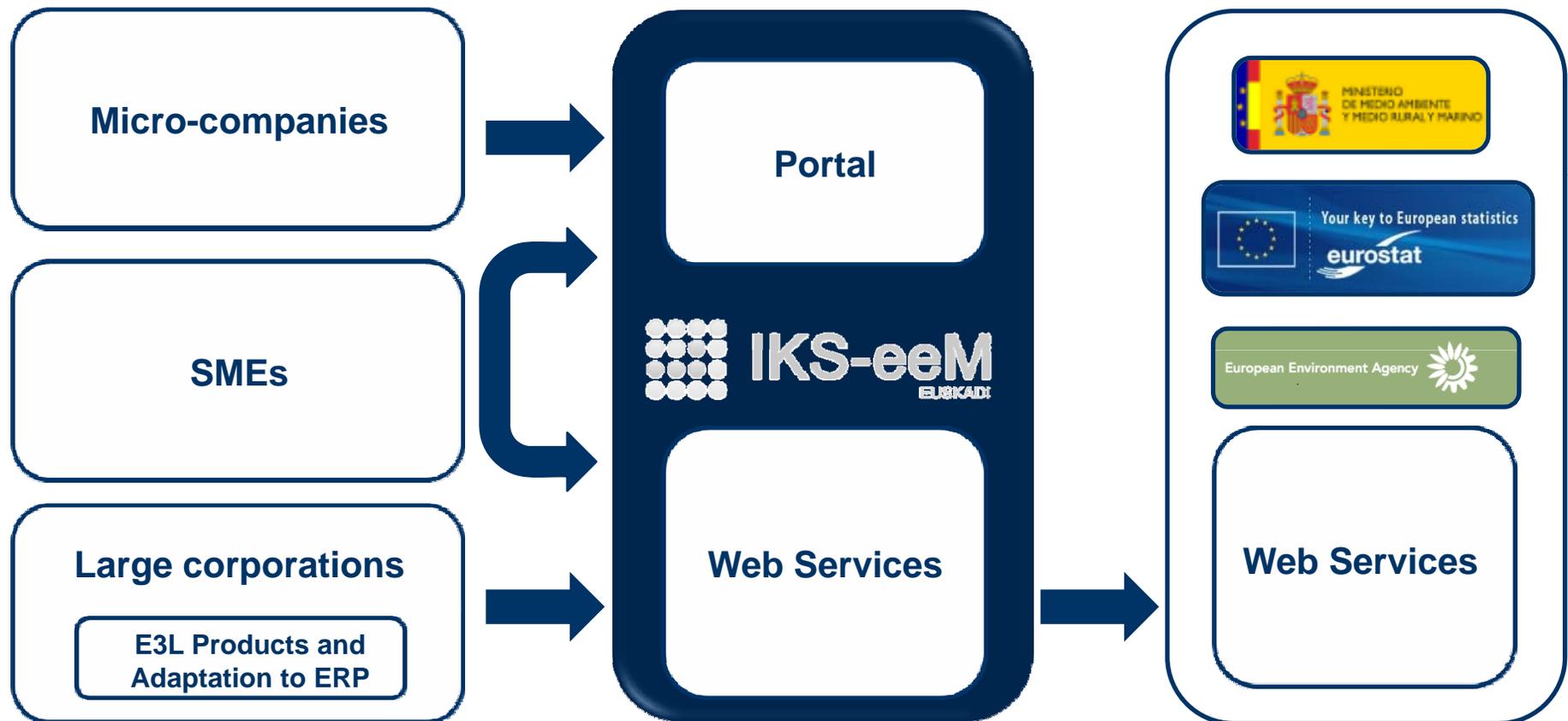


- The Need
- The Roadmap
- The solution
- Tendencies and experiences
- **Living in the future**
- IKS-eeM – EDM integration



Living in the future

IKS eeM offers a response to the business community thanks to a complete adaptation to E3L.



Living in the future

Think Global, Act Local

- Intervention and research in EC groups
- Feasibility and applicability study at a local level

Innovation

- Communication: Social Networks
- Knowledge share

Interoperability

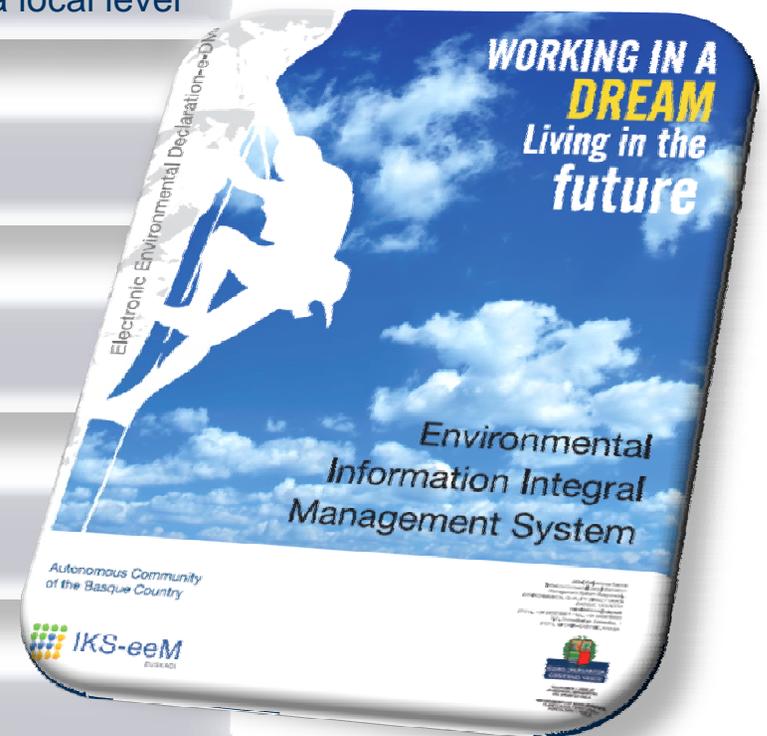
- Public and private stakeholders
- Common language, semantics

Cooperation

- Public-private collaboration
- Add ideas, divide budget

Competitiveness

- Reduction of administrative burdens
- Increase of control and efficacy



Better environmental information for better policies, regulation and reduction of administrative burdens

WHAT?

EU Member States must provide an efficient electronic system to fulfill their reporting obligations on EU environmental policies and legislation.

These systems have to be especially helpful in avoiding the duplication of reporting efforts, the streamlining of data flows, and reducing monitoring and reporting costs

WHY?

EU Policy makers at all levels are convinced that better decisions need better and more timely information

EU Member States deserves a modern, efficient and user friendly e-Reporting System to fulfill their reporting obligations related to European Union environmental policies and legislation.

Citizens are also entitled to know if the quality of air and water in their neighbourhood is good enough or if floods, droughts or pollution is risking their property and livelihood.

Living in the future



July 2006. Eurostat. “Manual for the implementation of Regulation (EC) N° 2150/2002 on waste statistics”,

WARNINGS



January 2009. European Environment Agency.
“Waste_without_borders_in_the_EU” .

RESPONSES

**Shared Environmental Information
System (SEIS)**

ISA programme

INSPIRE directive

BUT, WHEN?

In crisis periods only the imagination overcomes the knowledge
(Albert Einstein).

To act it is necessary to know and to know it is necessary to systematize.

The age of the delays, of the slightly effective measurements, of the mitigating and disconcerting speeches, of the doubts, it comes to his end.
In his place we enter a consequences period. (W. Churchill).

We have to promote the intelligent use of the information technologies
(Rahaf Harfoush)

Failing is not shameful, the shameful thing is not to try it.

CONCLUSIONS

This is why **it is absolutely vital** for the EU members and European Union to have interoperability information systems based on the latest information and communication technology (ICT) that will provide decision-makers at all levels (local to European) with real-time environmental data, thus allowing them to make immediate and life-saving decisions.

Today, the emerging challenge is to use ICT technologies to improve collaboration between organisations and to facilitate interaction with civil society at large. Without improved collaboration between European public sector organisations, growth and security, jobs and freedom or health and a safe environment will be more difficult to achieve the aims.

CYTIZENS

European citizens will be empowered by providing them with useful environmental information in their language and thus enable them to make informed decisions on their environment and influence public policy.

BENEFITS

AUTHORITIES

Better decision-makers

Facilitate the drafting, implementation, and effectiveness of environmental policies

The quality of the provided information will be increased.

Improving the cost-efficiency of current investments

Interoperability.

Improving the mechanisms for collecting, exchanging and using the data.

PRIVATE ENTITIES

Fulfil their Reporting obligations related to EU environmental policies.

Simplify the reporting and accessing of environmental information

Reducing the administrative burden.

Monitor once for timely and multi-purpose uses

Businesses are only required to monitor on aspects of their operation which are necessary



- The Need
- The Roadmap
- The solution
- Tendencies and experiences
- Living in the future
- **IKS-eeM – EDM integration**



“ACCEPT THE MISTAKES WE COULD HAVE MADE DURING THE PROCESS, LEARN FROM THEM WITH THE AIM OF NOT REPEATING THEM IN THE FUTURE”.

“WE ENJOY OUR SUCCESS AND LEAN FROM OUR MISTAKES”



Thank you very for your attention!!