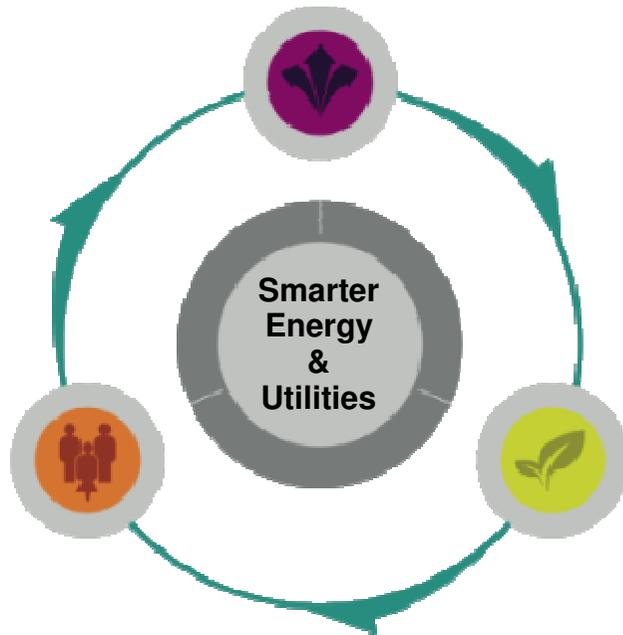


Presentation of IBM SAP Utilities Competence Center

Barcelona, January 2012

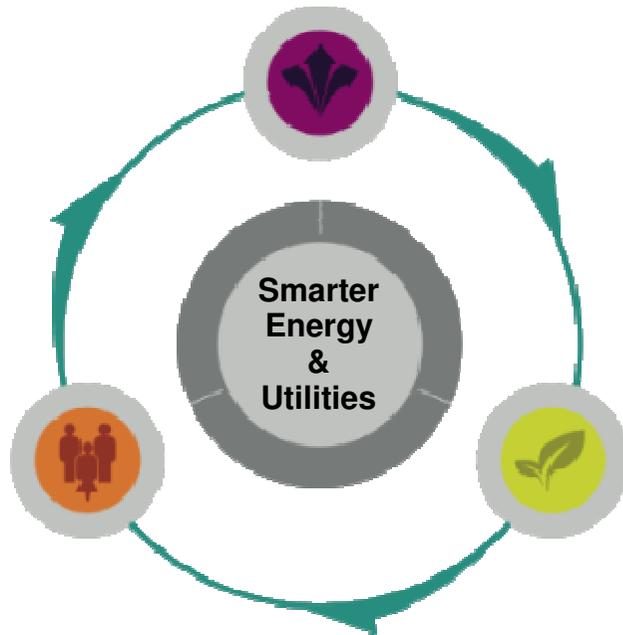


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IBM is witnessing the emergence of global market forces driving the transformation of the Energy & Utilities industry

These forces are already impacting the industry and causing changes to the business and operation models



New entrants and disruptive technologies



Climate change and environmental concerns



Growth in renewable generation and distributed resources



Aging asset performance with increased expectations on reliability

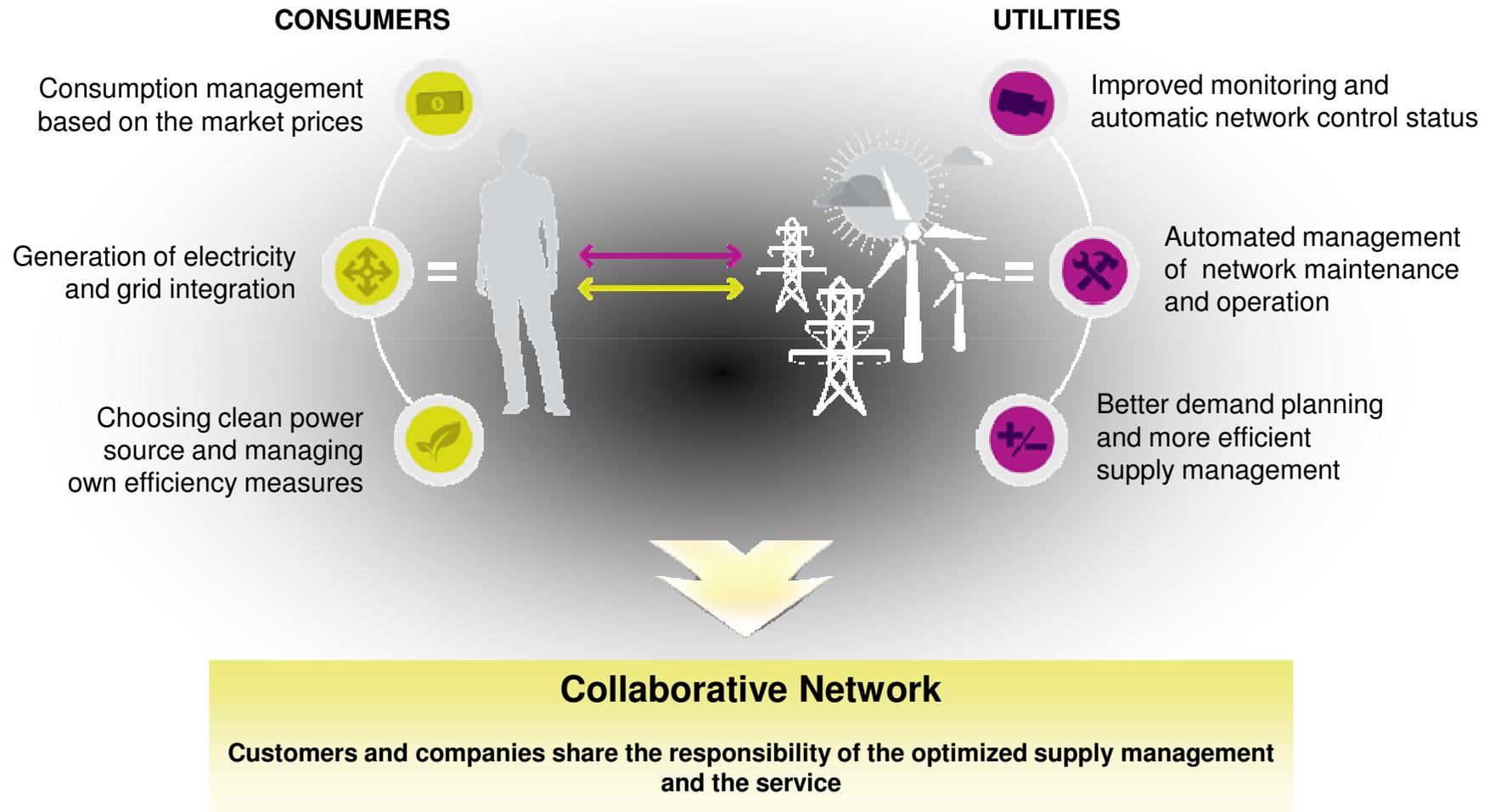


Increased demand vs. pressure for operational efficiency and workforce productivity



Increasing desire by consumers for a role in energy management and conservation

New technologies and available capabilities are promoting a change in the relationship between customers and Utilities, and new business models



To be successful, Utilities companies should focus on three lines...



Grid transform

Transform current electricity, gas and water grids into dynamic, automated networks with reliable information

-  Smart Metering
-  Smart Grid Strategy
-  Grid Operations
-  Asset Lifecycle Management



Reinforce customer focus

Reinforce the power of the customers and improve the support, providing consumption information in near real time

-  Customer Management
-  Smart Grid Analytics
-  Customer Systems
-  Customer Care
-  Electric Vehicles Distributed & Energy Resources

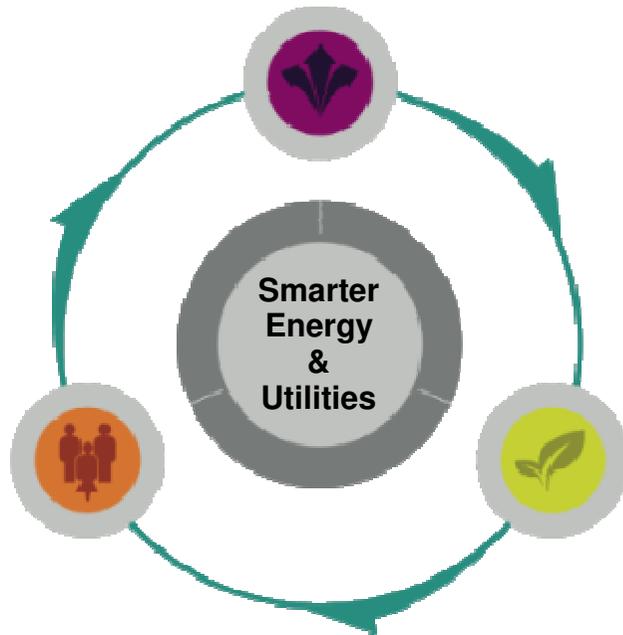


Ensure a cleaner energy

IBM SAP Utilities Competence Center specializes in customer focus, through the information systems, with a solution model based on SAP

-  Plant Life Optimization (conventional and renewable)
-  Energy Efficiency - Smart Building

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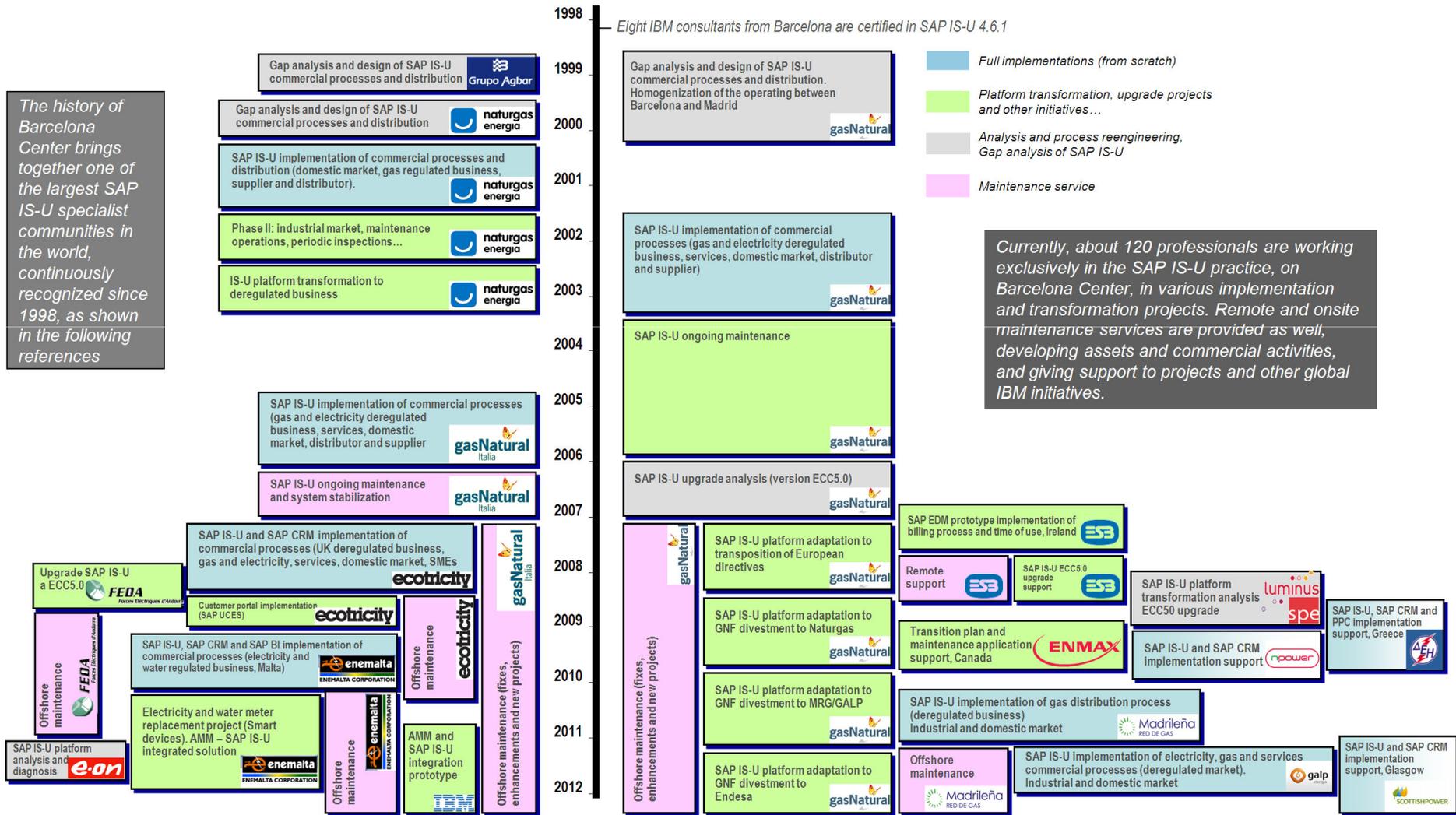
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IBM SAP Utilities Competence Center

- IBM, based on multiple experiences on Utilities customers, has set up a Center of Excellence intended for Utilities companies, consisting of more than 150 professionals with expert knowledge in process and systems.
- The main activities of the Center can be summarized as follows:
 - Facilitate **implementation of SAP solutions** associated with the energy sector (particularly **SAP IS-U and SAP CRM**) to all energy sector companies with **tight deadlines and minimal risk**.
 - Providing **maintenance services** (fixes, enhancements, user support, new projects...) of these solutions ensuring the highest quality, adopting continuous improvements and with a **flexible approach and sustainable cost**.
 - Carrying out **transformation projects** with a high component of sector strategy and change management (**integration and consolidation of technology platforms, merger** of companies, **divestments**, big **regulation changes** (i.e. market deregulation), redesign and **process and systems re-engineering** for the main areas of business of an utility company...
 - Promote the development and use of **assets** and highly **innovative** solutions that will contribute to encourage and facilitate the practice within sector.
 - Give internal **support** to IBM initiatives **worldwide**.

Our SAP Utilities Competence Center is one of the largest SAP IS-U specialist communities in the world

The history of Barcelona Center brings together one of the largest SAP IS-U specialist communities in the world, continuously recognized since 1998, as shown in the following references



Our value proposition

<p>Security and guarantee of success in SAP IS-U implementations ...</p>	<ul style="list-style-type: none"> ▪ 100% of SAP IS-U / SAP CRM implementation projects completed on time ▪ 14 years of experience without troubled projects ▪ Leading company in the market, with established reliability by SAP ▪ Record time in SAP IS-U / SAP CRM solution implementations
<p>Very competitive maintenance service model...</p>	<ul style="list-style-type: none"> ▪ Optimal balance in quality, productivity and cost ▪ Clear business orientation, with response times that allow business evolution and provide a competitive advantage ▪ Wide range of services ranging from corrective maintenance, enhancements, user support to new projects ▪ Optimal capacity management model ▪ Management model, tools ▪ Global Delivery center integration (India, Latin America, INSA ...)
<p>The largest concentration of expertise in processes, systems, and sector knowledge ...</p>	<ul style="list-style-type: none"> ▪ Fourteen years continuous practice in SAP IS-U ▪ 150 professionals, including about 80 with specific knowledge on SAP IS-U and SAP CRM ▪ Experience in all sectors : gas, electricity and water ▪ In-depth knowledge of the process and the industry nationally and internationally
<p>At the technological forefront...</p>	<ul style="list-style-type: none"> ▪ Implementing the last versions of SAP IS-U ECC6.0 and SAP CRM ▪ Integration of AMM solutions with SAP IS-U / SAP CRM
<p>Using the accelerators...</p>	<ul style="list-style-type: none"> ▪ The concept of packaging brings a set of assets that accelerate and facilitate implementations.

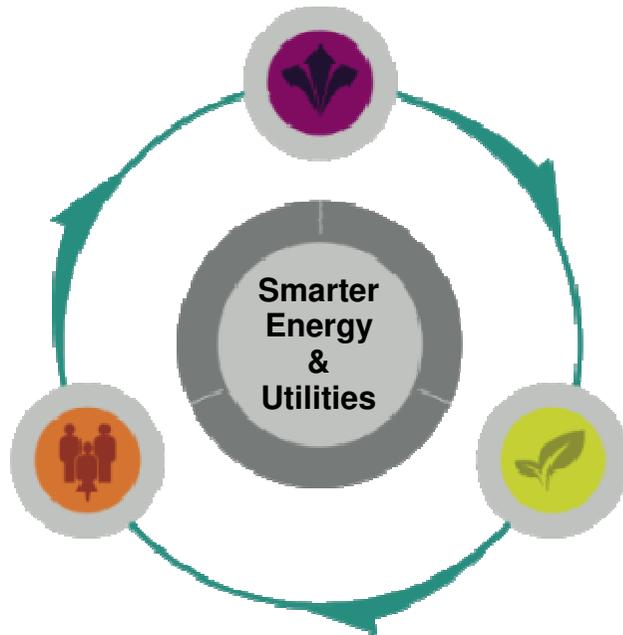
SAP for Utilities: standard, open and flexible solution

- SAP for Utilities is a **mature product**, implemented in more than 600 customers worldwide, **fully integrated** with **SAP ERP**.
- As most of COTS (Commercial Off The Shelf) solutions, differs from customized or hybrid solutions in providing several tools that enables you to :
 - Take as reference **best practice functionality, adaptable** to most of the utilities processes, allowing **flexibility in maintenance**.
 - **System integration** regardless of the product.
 - Access to user guides, structured training and implementation methodologies. **Frequent release** of **new versions** available to all customers.
 - Increased speed and frequency of **product evolution**.
 - Greater support network and maintenance contracts with the vendor.
- Allows the company to have **independence of the maintenance service provider**. There is a large number of enterprises with SAP IS-U capabilities. All the major international consulting firms provide implementation service with added value of design-level processes, etc.

SAP for Utilities: Market trends

- Initiatives that utilities sector companies are undertaking or are expected to, based on our knowledge of the sector in Spain and at international level:
 - Integration with IBM **AMI platforms** (Advanced Metering Infrastructure).
 - Streamlining of **multi-product management** for the same client.
 - Adapting the systems to **fully deregulated business**.
 - Optimization of **Virtual Offices** or customer portals.
 - Multichannel integration of Customer Service requests.
 - Integration of authentication certificates for electronic invoices.
 - Optimizing portals for sales agents and distributors.
 - Adapting to an **increasingly customer-focused Market**, because customer's passivity is becoming active participation.
 - Optimization of **efficiency of Call Centres** and reduction of the response times.
 - ...

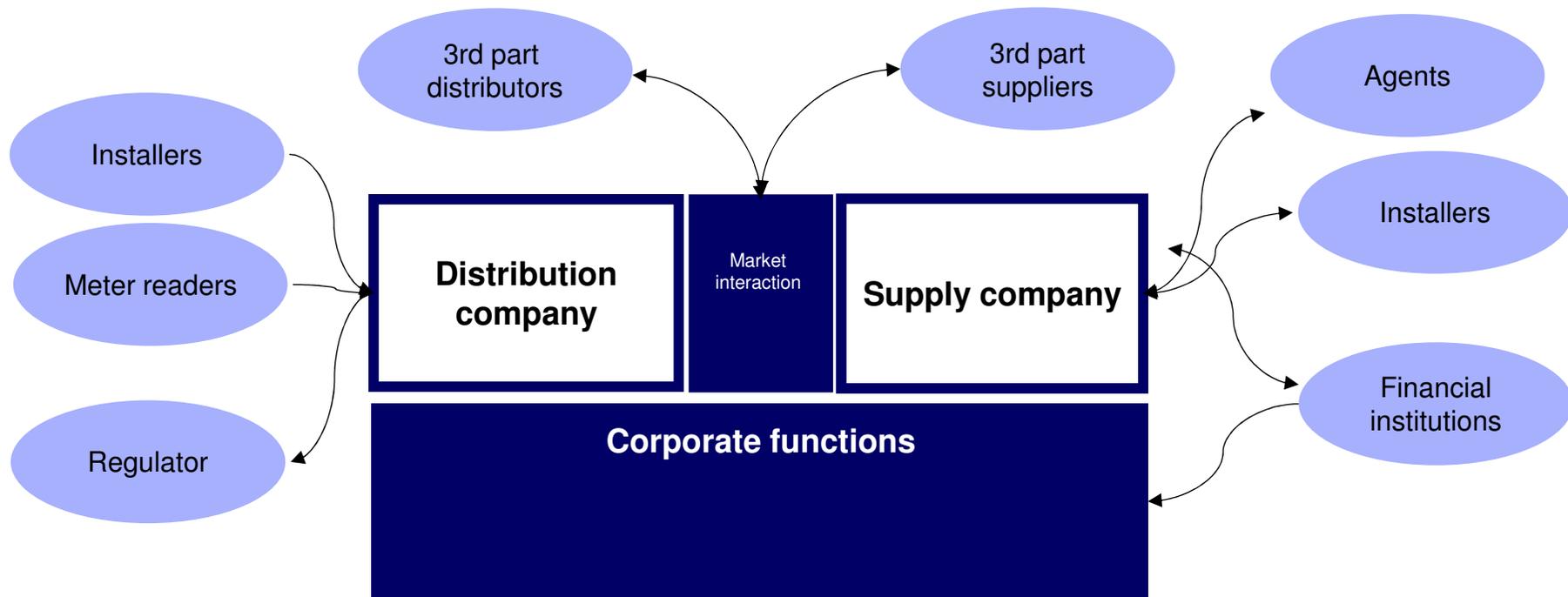
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Our solution model has evolved over the progressive deregulation of the business...

- Deregulated business needs require a complete separation of the supply and distribution activities into two different companies.
- Proposed solution model meets the required legal separation of supply and distribution activities.



...to an increasingly specialization and separation of supply and distribution activities

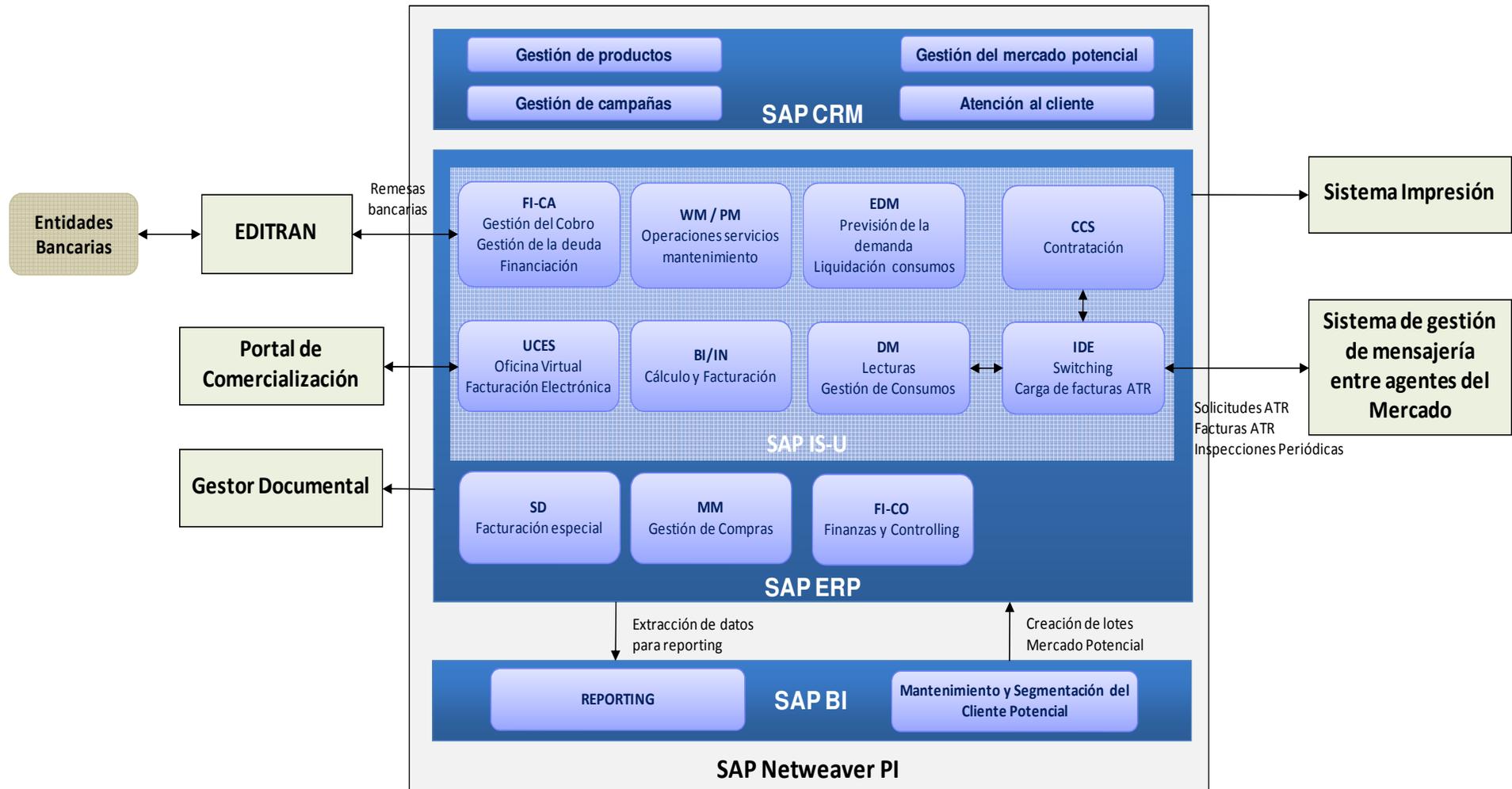
Distribution:

- The distribution business consists of **invoicing TPA (third party access) fees** to supply companies with supply contracts for each registered point of delivery.
- The growth of this business requires the extension of the distribution network through organic expansion or through acquisitions. The business requires **precision in profitability studies** for expansion to prevent expected benefits erosion.
- Once put into service it is not possible to increase the profitability of each supply point, and therefore, the focus must be in **minimizing the network operation costs**.

Supply:

- The supply business allows **increasing the profitability of each supply point** selling other contracts and services to existing customers.
- Supply requires **activities / campaigns in order to attract new customers** for new supplies or other coming from other suppliers (switching). It requires customer retention activities as well.
- The business allows **free pricing models, discounts, etc.**

The following schema shows the target system landscape for supply areas:



Supply system landscape detail:

SAP IS-U:

- **EDM: meter reading management** with period **shorter than 1 day** (quarter-hourly, half-hourly or hourly) for industrial customers. It also allows the management of **demand planning** and **consumption invoicing**.
- **DM: meter reading and consumption management** with period **longer than 1 day**. It is also used for periodic **verification and inspection** of **measuring equipments**.
- **FI-CA: collections** management, **accounts payable and receivable** (credit and debit management) and financing.
- **BI/IN: periodic billing** management, both supply and maintenance services to end customers. Also used for sending **invoices to the printing system**.
- **CCS: TPA requests** management sent to the distributors and management of TPA communications sent by the distributor.
- **IDE: back-office** management of the **messaging between market agents**, using workflows and specific business validations. It is also used to manage the load of TPA invoices sent by the distributor.

Supply system landscape detail:

SAP IS-U (continued):

- **WM/PM: maintenance services** and meter operations management.
- **UCES: customer portal** management to provide **electronic services** (E-Services) for **end consumers** (change account information, display and pay bills, perform move-in and move-out processes, and enter meter-reading data).

SAP ERP:

- **SD: billing of special items** (periodic inspections, meter and premise related operations, move-in related charges, etc.).
- **MM: purchase** processes management (providers management, purchase requests and orders).
- **FI-CO: financial accounting and controlling** process management (budget, fixed assets management, taxes, bank guarantees, accounts payable, accounts receivable, treasury, accounting closing and controlling).

Supply system landscape detail:

SAP CRM:

- **Product management: creation and update of products** using the definition of its attributes and characteristics.
- **Campaign Management:** design and creation of **marketing campaigns** for gaining new customers.
- **Management of the potential market:** identification and management of potential customers.
- **Customer care:** information, action and claim requests management client-initiated.

SAP BI:

- **Reporting:** scorecards and reporting management (legal, operational, corporate, ...)

Supply area specific solutions:

1. Supplier systems implementation project:

- View [GALP Energía](#) reference

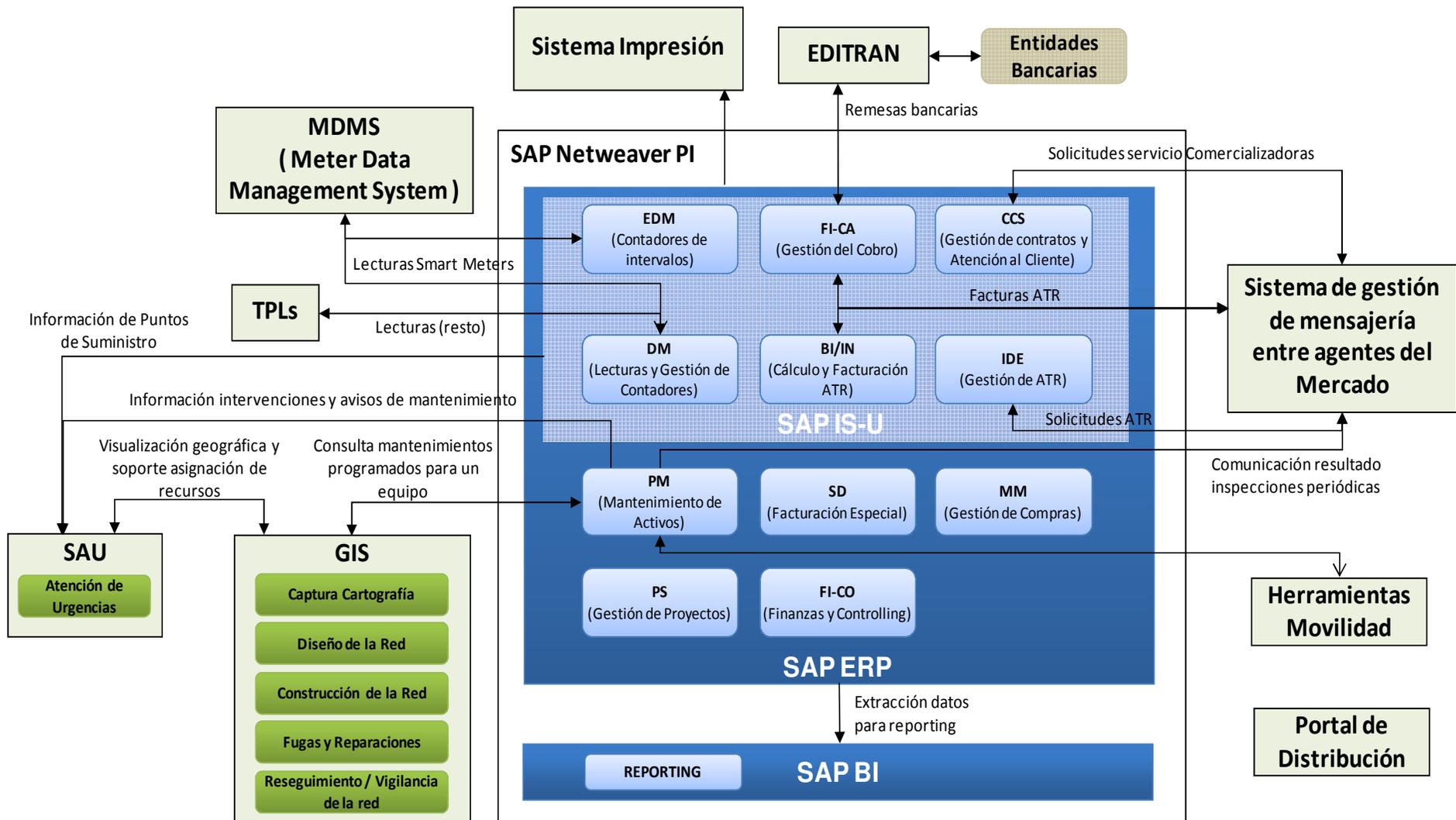
2. SAP CRM integration:

- View [Scottish Power](#) reference

3. Localisms:

- View [Gas Natural Spain](#) reference
- View [Gas Natural Italia](#) reference

The following schema shows the target system landscape for distribution areas:



Distribution system landscape detail:

SAP IS-U:

- **EDM: meter reading management** with period **shorter than 1 day** (quarter-hourly, half-hourly or hourly) for industrial customers. It can be **integrated with MDMS** to receive smart meter readings. It also allows the management of **demand planning**
- **DM: meter reading and consumption management** with period **longer than 1 day**. It can be integrated with reading mobile handhelds to receive meter readings collected by meter readers, or with MDMS to receive smart meter readings. It is also used for periodic **verification and inspection of measuring equipments**.
- **FI-CA: TPA collections** and **direct clients collections** management.
- **BI/IN: TPA fees** and **meter rentals periodic billing**. Also used for sending **invoices to the printing system**.
- **CCS: management of TPA requests** sent by suppliers and contracting requests of direct clients.
- **IDE: back-office management of the messaging between market agents**, using workflows and specific business validations. It is also used to manage the load of TPA invoices sent by the supplier.

Distribution system landscape detail:

SAP ERP:

- **PM: preventive maintenance** management by designing maintenance plans for the various elements of the **network** hierarchy. It also allows **corrective maintenance** management using notifications and work orders to record and process anomalies.
- **PS: infrastructure projects follow up** by assigning and planning resources and by calculating associated costs.
- **SD: billing of special items** (periodic inspections, meter and premise related operations, move-in related charges, etc.).
- **FI-CO: financial accounting and controlling** process management (budget, fixed assets management, taxes, bank guarantees, accounts payable, accounts receivable, treasury, accounting closing and controlling).
- **MM: purchase and logistic** processes management (materials procurement, suppliers management, purchase requests and orders, and stock management).

SAP BI:

- **Reporting:** scorecards and reporting management (legal, operational, corporate, ...)

Distribution system landscape detail:

SAU:

- Management system of **emergency notifications**

GIS:

- Geographical Information System for the **analysis and design of network roll-up**

Distribution area specific solutions:

1. Distributor systems implementation project:

- View [Madrileña Red de Gas](#) reference

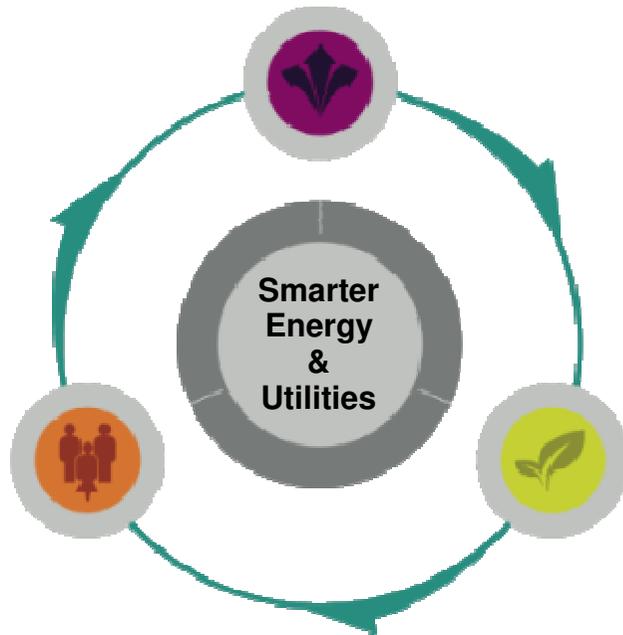
2. MDMS (Meter Data Management System) integration:

- View [La Gaude](#) reference

3. Regulated business implementation project, integrated with CRM and MDMS:

- View [Enemalta](#) reference

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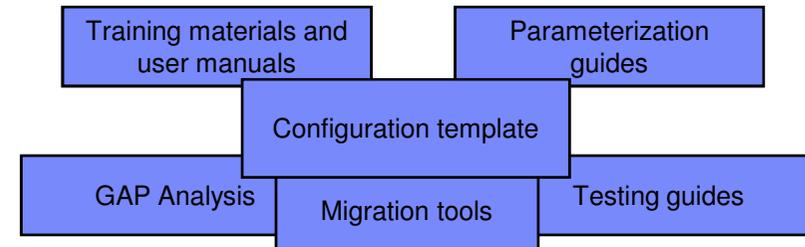
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The concept of packaging brings together our own accelerators that the Center has developed since it was created

Definition	
<p>The Packaging is a tool that helps streamlining implementations of the management model and the business processes defined.</p>	
Objectives	Deliverables
<ul style="list-style-type: none"> Facilitate the implementation of the model, both processes and systems Allow the adaptation of the model to other environments Facilitate partial implementations of the model, for example, specific modules on the system 	<p>FUNCTIONAL PRESENTATIONS:</p> <p>Detail the processes included in the model and its reflection on different systems, and provides support for initial training and the rest of the implementation.</p> <p>BUSINESS BLUEPRINT.</p> <p>IMPLEMENTATION GUIDES:</p> <p>Contain multiple deliverables structured according to implementation phases in order to ease them:</p> <div style="text-align: center; margin-top: 10px;"> </div>
Benefits	
<ul style="list-style-type: none"> Tool that accelerates and facilitate implementations Reduces teams and implementation costs Helps on integrated processes management Contributes to the convergence of the business units, using standardization Supports providing shared services Sensitivity to business units Business and companies Tool alive, with continuous improvement 	

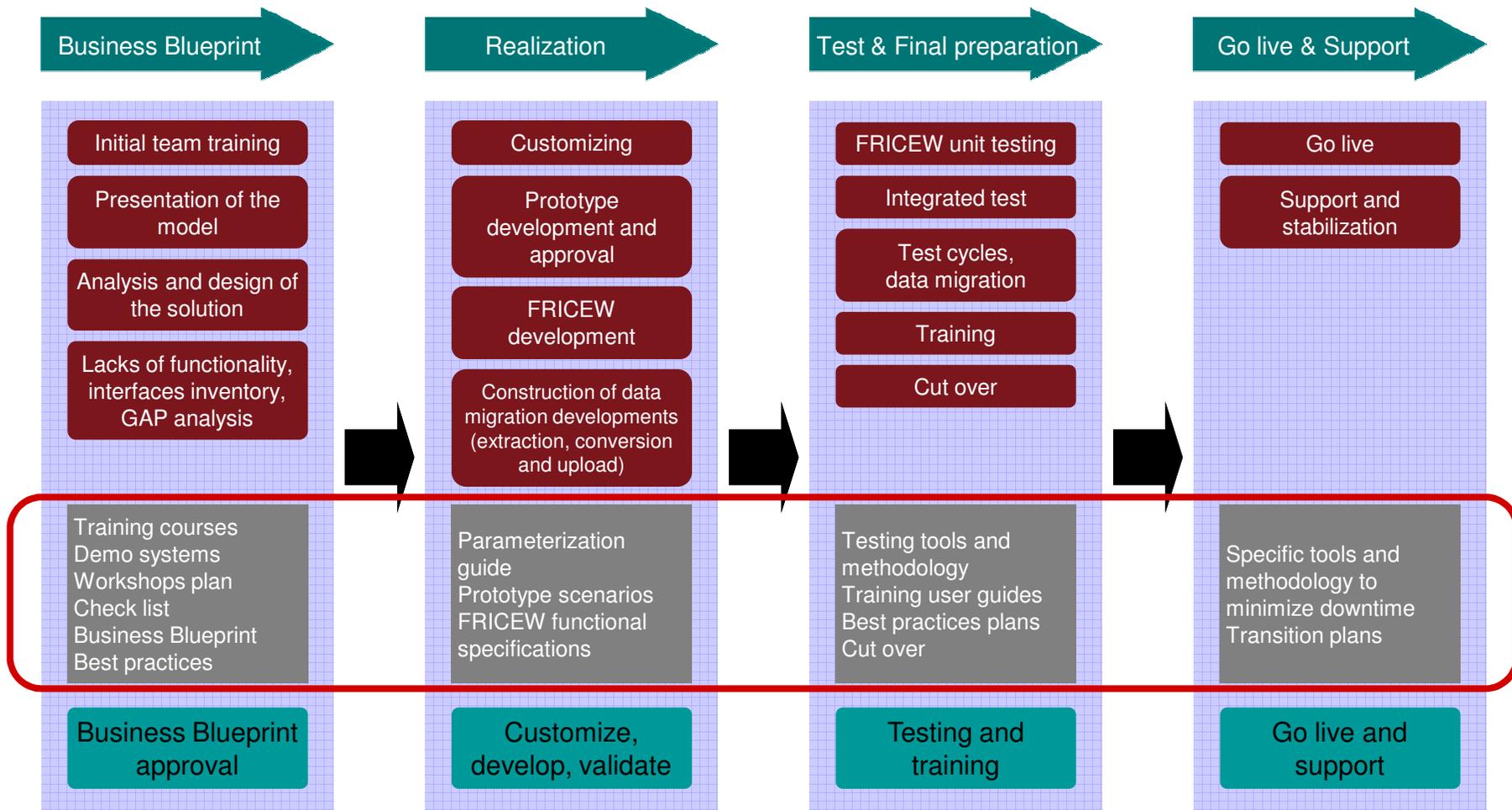
Implementation guides consists on:

- **Training materials and user manuals:** user and training manuals with common information of implementations, which are updated with the particularities of each implantation
- **Parameterization guides:** based on our experience in different implementations we have configuration guides for each of the modules in SAP IS-U. These guides are used as a starting point when customizing new implementations.
- **Gap Analysis:** for each functional area (customer care, contracting, meter reading, billing & invoicing, collections, operations) we have lists of possible Gaps (and possible ways to handle them) that may arise during analysis and design in a new implementation.
- **Migration tools:** own developed tools that have been created to speed up and optimize migration processes.
- **Testing guides:** for each functional area we have testing guides that can be used as a baseline in constructing new projects. It is only required to adapt them to the specific characteristics of each implementation.
- **Configuration templates:** IBM offers preconfigured templates (La Gaude, UK) for SAP IS-U and SAP CRM standard functionality. These templates are used to accelerate the construction phases of new implementations.



Implementation methodology used is a key factor to ensure the maximization of the value of the accelerators

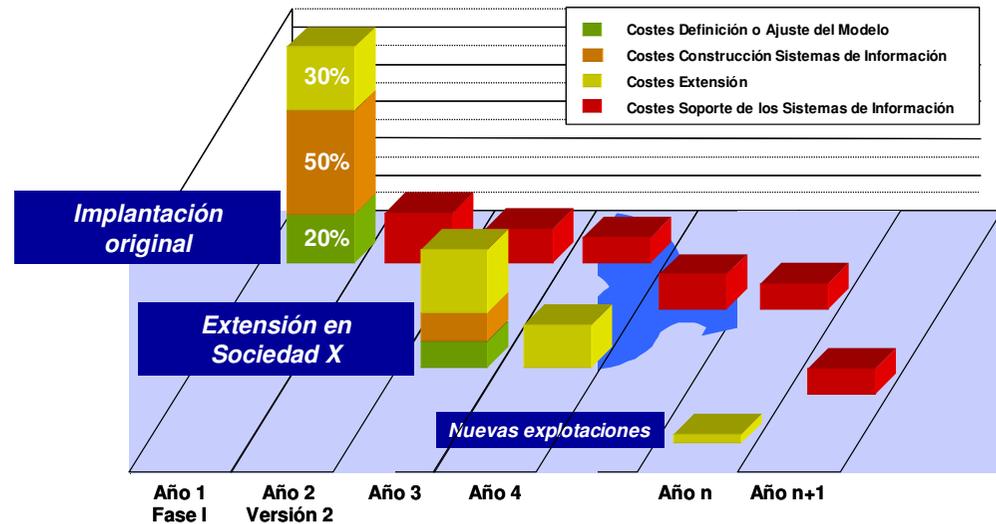
Implantation phases



The benefits are measured in a tangible way, with increasingly shorter terms and less costs of implementation

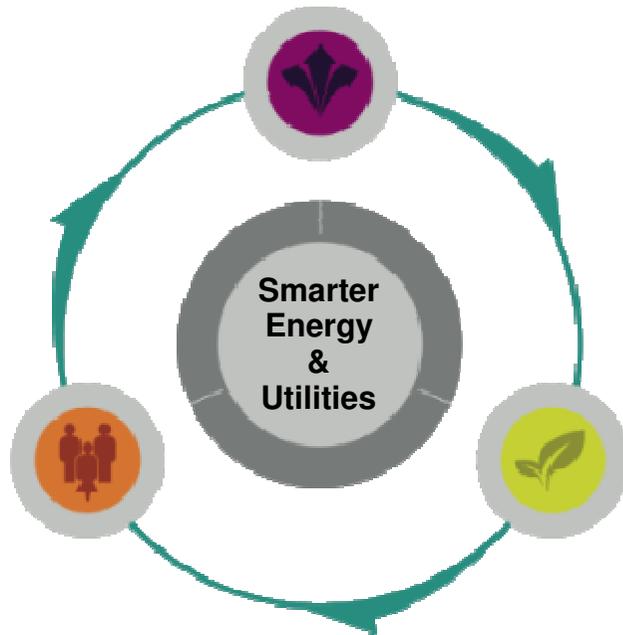
Implementations undertaken with this approach require less effort due to the synergies that can be obtained from previous investments:

HOT TOP FIVE IS-U IMPLEMENTATION RECORDS			
CLIENT	YEAR	CHARACTERISTICS	MONTHS
ECOTRICITY	2007	Electricity supplier Deregulated business, UK	8
GAS NATURAL ITALIA	2006	Gas supplier and distributor Deregulated business, Italia	5 + 3
MADRILEÑA RED DE GAS	2010	Gas distributor Deregulated business, Spain	7
GALP	2011	Gas and electricity supplier Deregulated business, Spain	6 + 3
IEC (*)	2012	Electricity supplier and distributor Regulated business, Israel	5



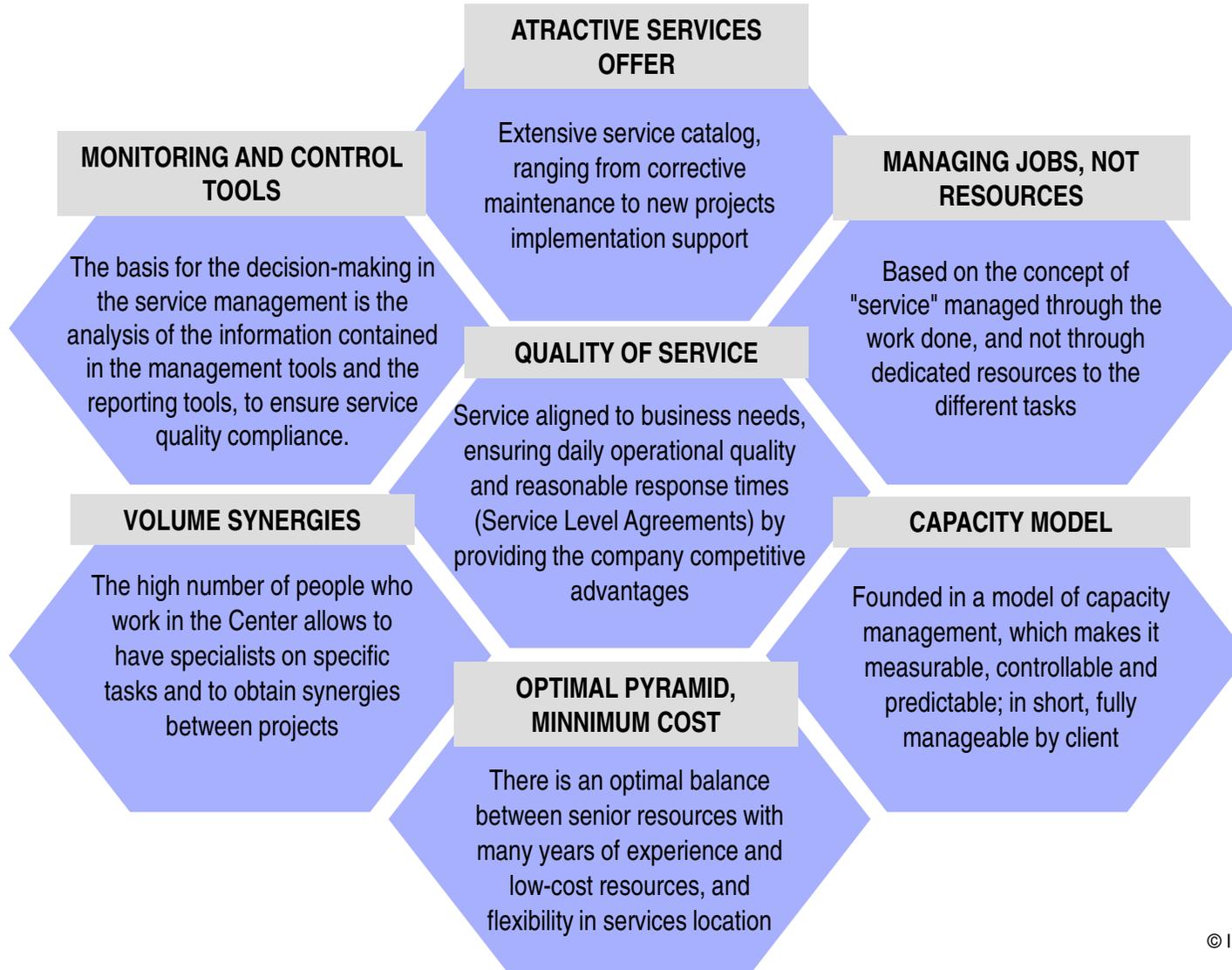
(*) Pending to start

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Our value proposition in support and maintenance services are based on minimizing the cost and maximizing the service quality and the organizational efficiency and processes.

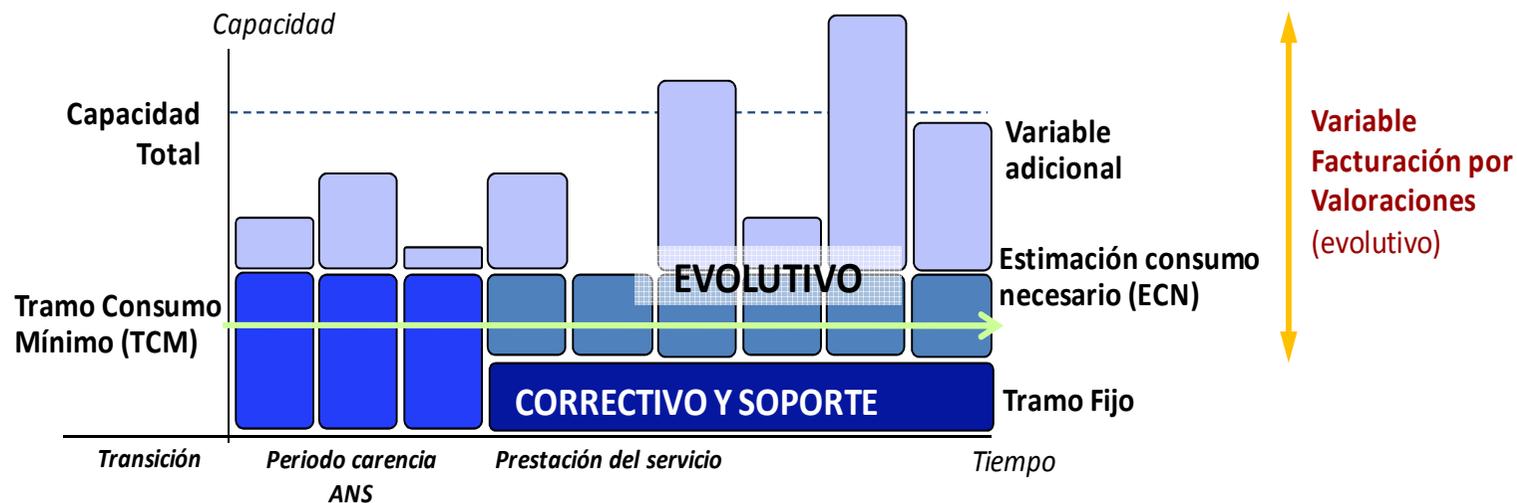


Our extensive services catalog ranges from minimum corrective support to big enhancements (projects)

TIPOLOGY		DESCRIPTION	
Evolutionary maintenance	This service covers software changes result of new requirements, but based on an already existing functionality. It includes the activities related to evolutionary maintenance, preventive maintenance, data extraction and the preparation of training material for the new implemented functionalities.	Enhancements	Consists on those tasks involving a development and implementation of enhancements identified and prioritized by the business.
		Preventive maintenance	Service focused in investigating, studying and proposing improvements and / or changes in the applications in order to improve already covered business process. It also includes performance issues, improvement of system operation and reducing the corrective maintenance.
Corrective maintenance	This service is aimed to resolution of incidents, understood as improper production system operation, as long as they are not affected by changes on internal environment (HW and basic SW) and / or external (new functionalities).		
Support	This is a support-oriented service to provide help on processes belonging to user, or to provide resolution of technical or functional enquiries of the applications.		
New projects	This service include the development of new applications (new developments) as well as the required changes for the upgrade of the application according to the needs of the company, in terms of management, legislative areas, regulations, or technology. The client decides to perform this new requirements as new projects for strategic reasons, requiring assessment, approval, and schedule (evolutionary maintenance resulting from new projects).		
Additional tasks	The activities included in additional tasks will be those requested by client which, by their typology, are not included in the service described above (learning, consulting, data extraction,...).		

The economic and capacity management model lets us offer to clients control and expense predictability ...

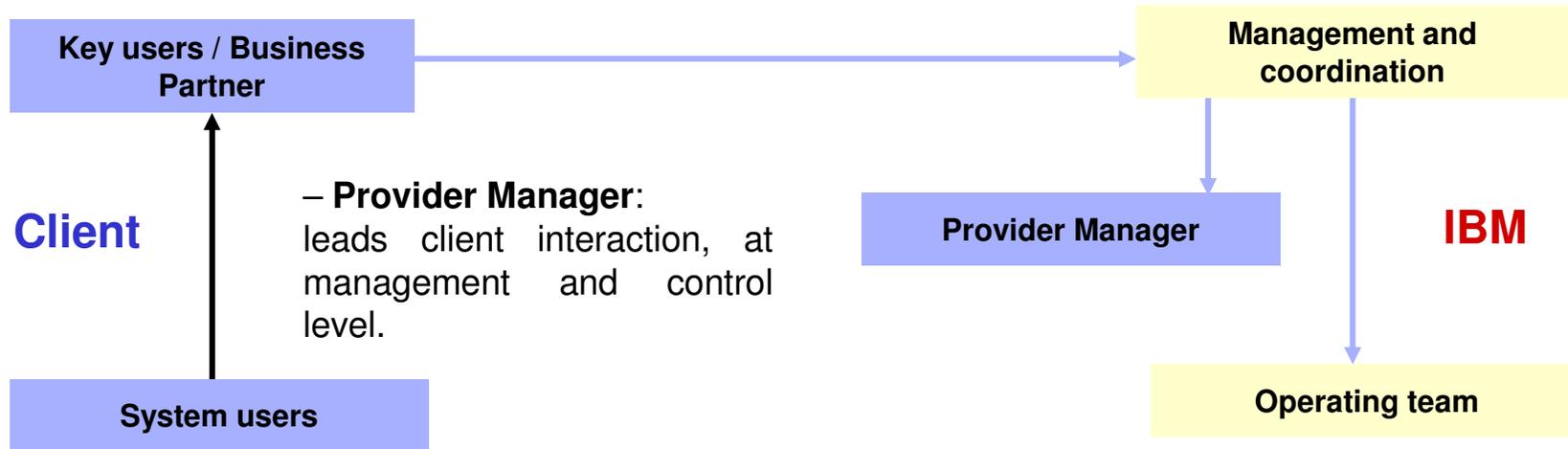
- **Minimum capacity:** minimum capacity necessary to provide resources knowledgeable in different areas and technologies.
- **Fixed capacity:** corresponds to the corrective and direct support. Includes any request for this type of maintenance regardless of the actual cost. It will be jointly agreed on the basis of first 3 months experience.
- **Required capacity estimation:** corresponds to the estimated volume of hours required to maintain systems. IBM can perform an analysis, together with the client, trying to get a close estimation, based on benchmarks of similar maintenance installations.
- **Additional variable:** extra capacity available for the client to develop scheduled enhancements. It is consumed, without monthly limit, based on ratings.



We propose an organizational and relationship model to support ...

– **Client key users / Business Partners:** user groups coordinators, by department or functional area, who know operation of business on their area. They are the functional integration point between Business and Systems. They request specific support and report corrective needs.

– **Service management and coordination:** have the responsibility of enforcing service level agreement. They have technical knowledge of the system.

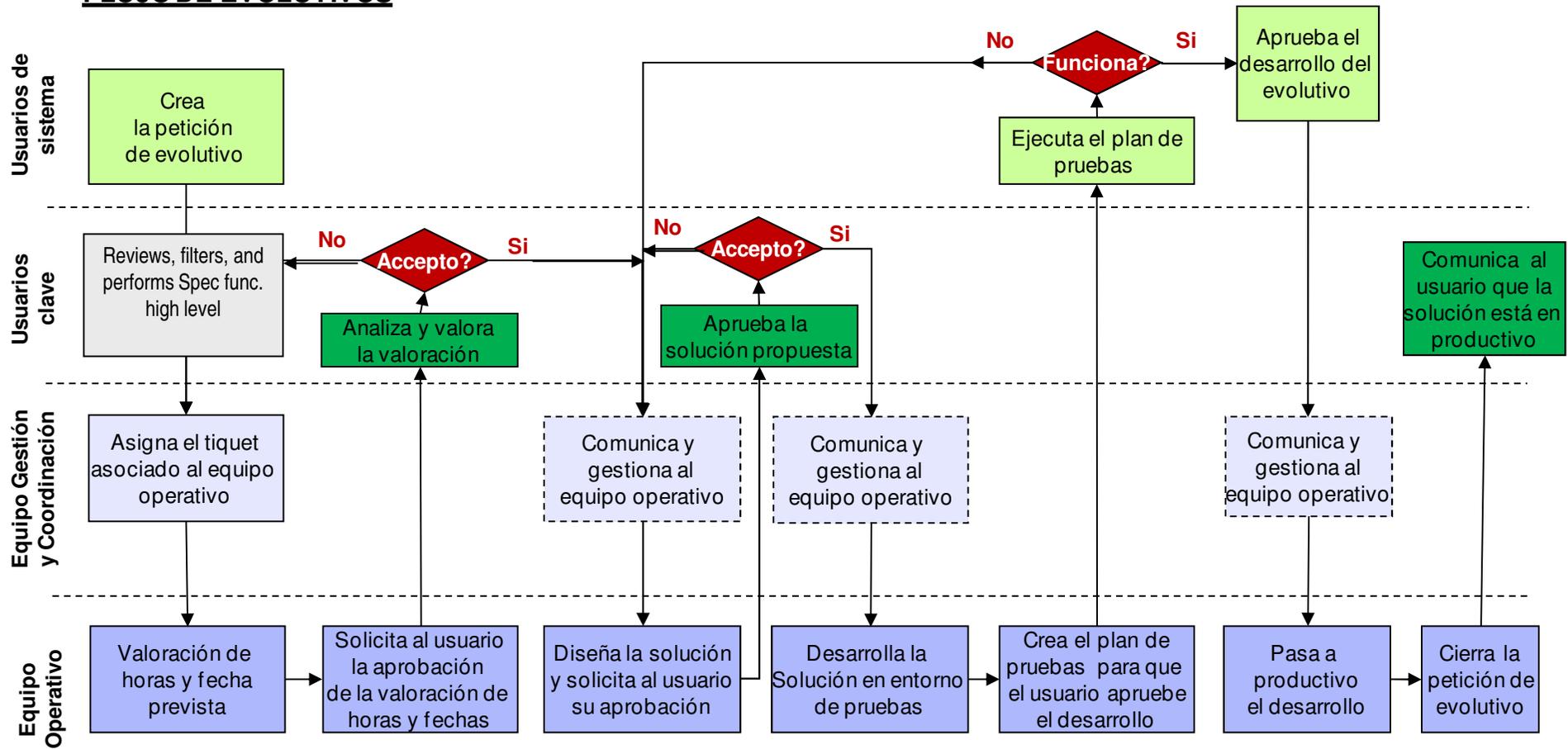


– **System users:** they daily work with the system and are the source of the job requests. Key users receive and streamline requests coming from all system users.

– **Operating Team:** performs maintenance work, correction of incidents and support to users assigned by Service management and coordination.

... processes optimized with practice.

FLUJO DE EVOLUTIVOS



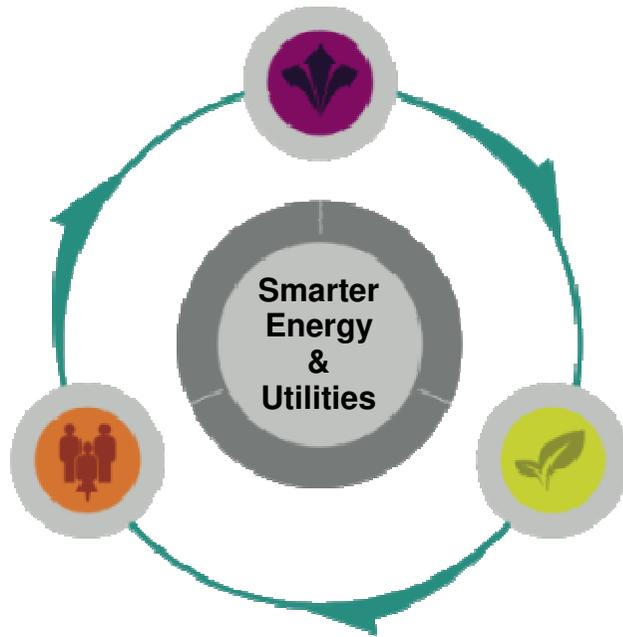
SIG: our own management tool, essential to ensure quality and follow-up reporting ...

- Service management, and the required reporting to guarantee it, is based on an own tool developed by the Center: SIG (Integrated Management System). This tool allows a complete and detailed monitoring of all the requests handled by the maintenance team.
- This tool can easily be integrated with any client tool.
- Is a feature of the tool to ensure that the information flows to the right people at the right time. The tool provides management reports to identify the effectiveness of the process and to detect possible points of improvement.
- Examples of processes supported by the tool are:
 - Registration and management of requests.
 - Quality management.
 - Allocations management.
 - Assessment of requests.
 - Configuration management.
 - Documentation management.
 - Scheduling.
 - Calendar planning
 - Service level agreements management.
 - Monitoring and control.
- Examples of reporting proposed by IBM to ensure service quality compliance, as well as to control and monitor the service:



Report	Information to present	Objective	Periodicity
Operative monitoring report	Ongoing requests detail	Detailed monitoring and control of ongoing corrective maintenance support requests	Weekly
		Control of the capacity (baseline)	
Monthly monitoring report (Management)	Service level agreements status (SLA)	Monitoring and Control of SLAs, operative processes, capacity evolution, and so on.	Each month
	Management report	Monitor and perform a Track of the Service	

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IBM references include major utilities companies...

- IBM has a strong presence in the main companies in the utilities sector, solidly based on long-term relationships. We have experience in all sectors (water, gas and electricity) and in all business areas (supply, distribution, corporate...)
- In addition, we have worked both in Spain and internationally, in regulated and deregulated business.
- Figure below shows the most representative Spanish clients in the sectors of Energy and Communications:



... with an impressive list of implementations of new platforms, transformation projects, upgrades or maintenance services:

Successfully completed implementations:

- Naturgas
- Gas Natural domestic market
- Gas Natural Italy (Italy)
- Ecotricity (UK)
- Enemalta (Malta)
- Madrileña Red de Gas
- GALP Energía
- N-Power

Transformation projects

- Naturgas, adaptation to deregulated market
- Gas Natural, adaptation to TDE.
- Gas Natural, adaptation to divestments:
 - Naturgas
 - Madrileña Red de Gas
- Madrileña Red de Gas, adaptation to divestments
- GALP Energía, industrial market.

Implementations in progress

- PPC (Greece)
- Iberdrola Scottish Power (UK)

Upgrade projects (or version change):

- ESB (Ireland)
- FEDA (Andorra)

Maintenance Services :

- Gas Natural domestic market
- GN Italy (Italy)
- Ecotricity (UK)
- Aguas de Huelva
- FEDA (Andorra)
- ESB (Ireland)
- SPE/LUMINUS (Belgium)
- Aguas de Malaga (project office)
- Madrileña Red de Gas

Thank You!