# Internet strategies. It's time for the 'silent' Internet.

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## Summary

Internet is here to stay and guide the transition to the Information and Knowledge Society, as a breakthrough model, and as a tool for managing current businesses more efficiently. This is a revolution but also an evolution that has to do with the interiorization of Internet: what we call *'Business Internetisation'*. It's a silent, but firm process of transforming companies to a digital context. This is part of I-CONSneT investigation project that will present a competitive scenario description for construction companies in the new economy.

This paper reviews, based on I-CONSneT, the new competitive context and formulates an integral Internet strategy to help managers clarify and negotiate this new business scenario, entering on the 'Internetisation' era. The paper also reviews Spanish construction initiatives on e-business.

Internet, e-business, I-strategy, 'Internetisation', e-culture, 'silent' transformation, digital business, I-experience, e-business future.

## 1.  The new e-cosystem.

 We find ourselves in a period of transition to a new economic ecosystem that will bring not only profound changes in traditional organizations, but will also open up other totally different and new forms of business. We are migrating from an Industrial Society to an Information Society, a new interconnected economy with new rules that as yet are indistinguishable, unknown, because they are at present being defined. Internet has no past and its future is yet to be invented.
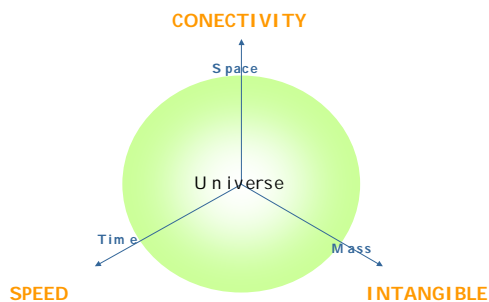


Fig. 1.  *Changes factors in the new ecosystem*

The new triad of factors that redefine this e-cosystem (Connectivity, Speed and Intangibles [1]) demand all shorts of changes, but all have the same common denominator: Internet. The new economy, together with Internet, is demanding structural, organizational and cultural changes. The ICTs affect everything and everybody. Construction and Civil Engineering firms should not ignore them.

At present, Internet and e-business are the most talked about topics, but what does e-business really mean? If a business is a group of processes integrated

in a value chain, an electronic business (e-business) is a conjunction of processes integrated in digital form. This means that e-business is different to e-commerce (firms selling via Internet). It is much more that this. E-commerce is synonymous to simple business transactions but e-business fundamentally covers a re-interpretation of business models and processes, converting a company into a digitally connected business. E-business is a culture, which has to do with connectivity, transparency, sharing, and integration: in transferring bits instead of atoms. This stimulates processes, converting firms in extremely sensitive networks.

In other words, any strategic business plan has to consider Internet as a key instrument within their competitive model. But it is not only necessary to reflect on it, but it is also important to act, experiment and create. In the world of Internet, with a plethora of numerous tendencies, models and services, **uncertainty is its main characteristic**. It is necessary, therefore to learn to live and manage in this every changing world, not looking for certainty, but perhaps minimizing current friction, which impedes us from operating adequately in it. We should accept ambiguity and learn to **manage the chaos**. And this is a trip that can only happen basing it in experiences, learning from them, destroying and reconstructing over more solid foundations. It is the only sustainable progress. So that in this way, Internet cease to be strange and disturbing, associated with speculation, and be considered natural and productive, in what it was destined to be. It will be then when "Internetisation" (Internet Interiorization) will take place.

## 2.    Defining an iPlan.

An intrinsic value exists in any process migrated to a web environment:  cost reduction, fast and higher quality response, tighter integration in the value chain (totally integrated processes) e-culture acquisition, but is it necessary to go further forward.  Becoming an e-business concern does not happen overnight. It is a controlled migration, a constant evolution from a state of experimentation to a complete transformation of business models, prepared to compete in the new e-cosystem defined by new economic values
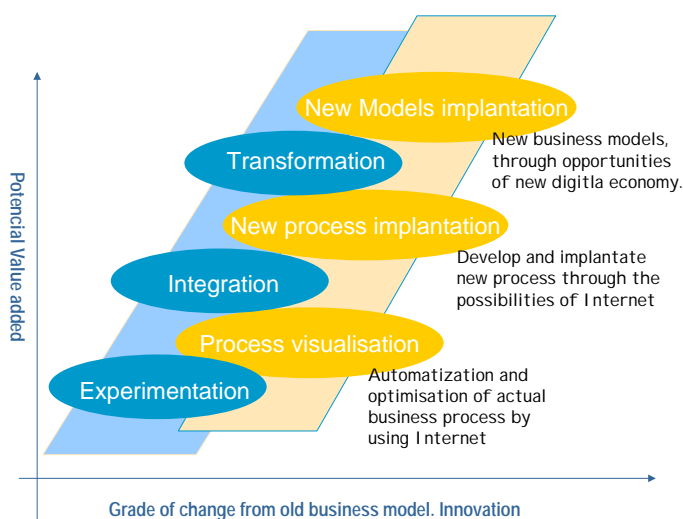


*Fig. 2.  e-business transformation.*

**Experimentation**: To be able to run, one must first learn to walk. Internet processes at this level are not associated to corporation strategy, but to totally functional orientation. It is a totally necessary phase the creation of Internet culture ("I-culture"); it is imperative for assaulting critical processes.

**Integration:** In this stage, Internet strategy is linked to corporation strategy. I-net processes appear linked to the company model through the integration of functional departments. Acting rapidly according to the needs of the customer, the company re-organizes its processes, with the result that costs are reduced and current processes are made more flexible. It is a search for efficiency using Internet technology.

**Transformation**: Internet strategy is turned into company strategy. The business model, new values and new revenues are redefined. Information asymmetry is the seed of new opportunities for re-thinking and re-designing all business structure, tasks, objectives and core business.

To be able to evolve on this long road, it is necessary to know where to go, and so, define the appropriate Internet strategy to achieve this vision in an integrated and ordered manner. To do this Inet migration is suggested with this characteristics:

- **Has 4 Areas**: All Internet strategy is divided in functions of key areas. 4 strategic areas where the company can act are defined depending on its situation and aptitude.
    - *Management area*. The application of Internet technology in internal processes as a basis for a strategy based on knowledge management. It is possible the first step

towards a controlled migration to the new e-cosystem. This can be the technological and cultural foundation for e-business experiences.

–  *E-business area*. In this area, the corporation develops processes outside the four walls of the company. The arrival of Internet offers the opportunity for the transformation of processes throughout all the chain value, channelling it via B2B-B2C portals or e-services.

–  *New business area*. Internet opens the door to new forms of doing business, new forms of customer satisfaction, new services, not only for current customers, but also with a broad range of diverse industries.

–  *Technology and Skills area*. As a common denominator of the rest of the areas. The companies should create a new architecture and infra-structural technology to support all Internet solutions. At the same time, they should make available the necessary training to ensure personal capabilities and skills on the Internet. The cultural organization of companies and user assimilation is an indispensable factor for the Internet strategy success.

- **It is evolution.** Depending on the technologies and market tendencies, internal and external processes have to be migrated progressively, so as to create new business initiatives. It is a dynamic and flexible process.

- **I-processes-I-Portales are concreted**. The results are different I-processes and I-initiative that converge on different portals as organizational expressions of processes.

To achieve this incorporation to this new economy, organizations must define an iPlan that responds to the strategic challenges, the market opportunities and human capacity. It is an individual process of analysis and planning that guarantees success in the progressive implementation of information technologies.

If there was a time that technology was only reserved for a few experts, as processes are being Internet based, it is fundamental and totally necessary to increase capability and skill technologies of people, because their communication depends on it. The human factor is a limiting factor in the 'Internetisation' process: his capacity to learn, to adapt to change. At the same time, the technological factor also has to evolve. ICTs, although are tremendously useful today, still needs an important process of maturity and humanizatio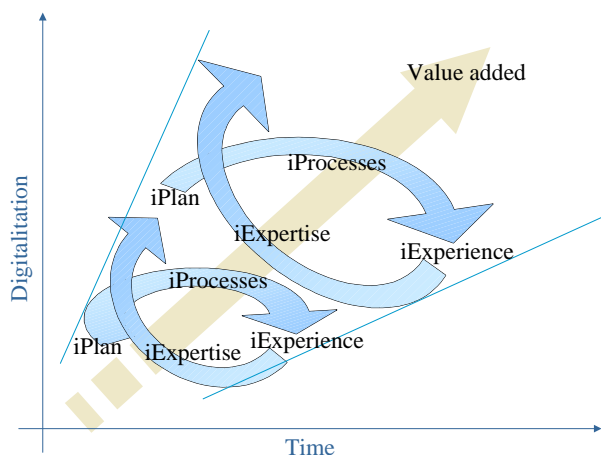n. An iPlan has to be, therefore, a guided migration process, based on experiences that unite processes, people and technology. In other words, company Internet strategies have to be a combination of organization, management, technology and chemistry. This last factor is what demands a dynamic and flexible plan, and not only a static and theoretical strategy. The creation of Internet experience and culture is the key to really transform business. Study-think-act-measure-rethink and advance. But how do you define an iPlan:



*Fig. 3. The 'Internetisation' Process*

**INITIATE**- A project vision, scope, calendar and success factors are then defined. In this phase it is necessary top management support. Everybody must be convinced of the benefits of Internet, so as to outline the potential strategic change. It is a stage for the creation of the team that heads the project, of defining responsibilities, of adjustment of dates… the result is a work plan to construct an iPlan.

**STUDY**- Analyse and ponder within the organization on vectors to act, the affected processes, and social implications. This internal pondering process and analysis is the starting point for defining an iPlan. This phase has to be directed by management, and will have in mind the defined vision, the evolutionary character of the project, its implications, its partners. The information on the strong
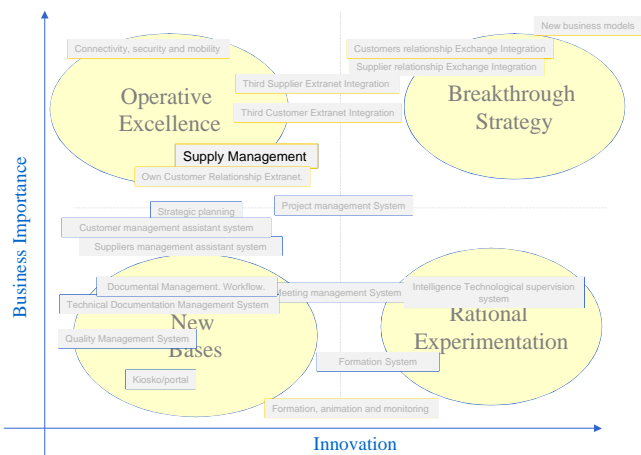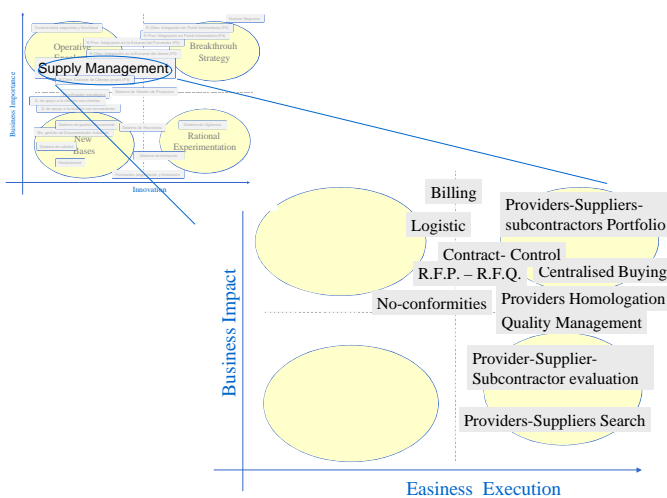
*Fig. 4. Value Matrix for I-Projects*



*Fig. 5.  Functional Matrix*

points and weaknesses of the company, the opportunities and challenges of the sector, as well as benchmarking of the e-business technology in the industry its own, as well as, that of another sector, are basic for defining strategic priorities. The result is a framework of Inet initiatives where the critical areas are identified.

**DEFINE**- At this phase, progressive steps are defined and concreted so as to the outlined objectives. The Management scoreboard framework is a good initial instrument to define actions linked to company strategy. Once identified, the Value Matrix [2] can be a good tool to manage and define priority projects. The result is performance priority projects.

**TRANSFORM-** Define a strategy to transform and implement Inet processes.

The projects have to be accessible, focussed in the immediacy, to learn while they evolve. This allows attacking others that are more complete once Inet culture is interiorised. To achieve benefits quickly, the basic functions of the projects or processes must be defined, and migrate those that can be taken on, leaving the more complex ones when the organization is better prepared to tackle them. The result is Inet actions.

**MEASURE**- Establish clear indicators to control and monitor the impact of the processes implemented. The emphasis has to be made in those activities that can be measured and evaluated so as to achieve success in the outlined objectives and tasks.

Having a web tool or process does not ensure the presence of customers (internal or external). Animation, training and renewal of skills campaigns are basic for achieving digital transformation. But migration must be monitored to know, follow and feel how it is being carried out.

## 3.    Spanish Construction industry Initiatives in e-business.

Construction is a sequence of a great number of different activities and disciplines. This makes of the construction business a highly complex exercise of coordination, cooperation and communication. Up to now, it was a work based principally on paper, with lots of delays and costs derived to inefficient communication. Nowadays, with Information Technologies growth, we are currently able to cut costs of unproductive activities and improve information flows in and out of the company.

Spanish Construction industry presents a relevant idiosyncrasy when taking into account the following:

- **Atomisation**. 90% of companies have less than 10 employees.
- **Complexity of products and services** in an industry as yet not sufficiently specialized. Which demands total coordination and interrelation among agents that at the same time are partners and competitors. Clear standardization is non-existent.
- **Local**. There is a clear dependency of local agents.
- **Technology deficiency**. There is a clear lack of 'info-structure' and technology culture, this

being more present in small companies

This is a scenario in which challenges management to convert construction companies into high technology industries. If we analyse through the value matrix the Spanish situation it is perceived that actions are centres on:
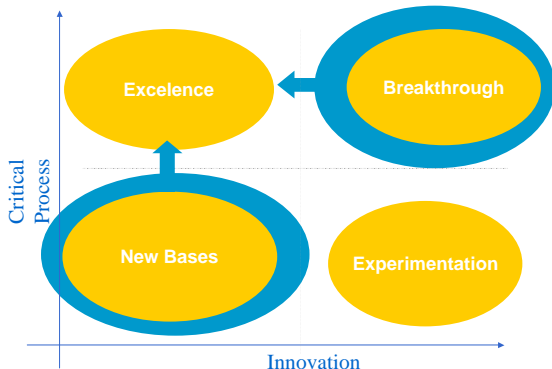


Fig. 6. *Spanish e-business initiatives*

Migrating its basic processes to a web environment through the development of Intranet, with the object of reducing costs, optimising current flow, and creating a new B2E communicative surrounding.

Currently, the adoption of construction companies to Information Technologies is causing profound changes in the organization. Spanish Construction companies are at present shifting from functional and pyramidal orientation to process or project-based organisation. To achieve this, they are in a complex process of gathering and integrating all their informational structure.

At the same time, they are discovering the gains of good information management. So they are moving from unidirectional information flow through the Intranet, to a complex network with workflow and document management though I-initiatives like: Quality Management System, Suppliers Management Assistant, Technical Document Management, Formation, Indirectly Aggregate Buying System…

On the other hand, and due to the asymmetry of market information, an explosion of new business models in the construction sector, such as market places, e-procurement hubs and others, has took place. High fragmentation and atomisation of the market, both with the products and services as well as companies, and high operational inefficiencies, are the ideal terrain for the growth of B2B activities in the form of totally new business models (breakthrough models).

Of these e-difica.com and build2build are emphasized as the largest Spanish construction vertical portals that offer on-line solutions in electronic commerce B2B and other complementary services.



**Build2Build** Construction Big Partners:
 *ACS, FCC, Ferrovial, Necso, Sacyr.*

**e-difica** Construction Big Partners:
 *Dragados, OHL*

Fig. 7. *Vertical Spanish Construction Portals: build2build.com and e-difica.com*

Both offer services such as Information (news, technical documents, legal finance, Business directory,) auctions, RFP-RFQs, online project management, project monitoring via webcams, but in general, they are principally centred on **supply chain management**.

Both base their model on transaction fees, but will they achieve sufficient liquidity to survive? It is evident that these models offer great benefits-advantages: lower prices (access to a greater number of suppliers, new purchasing models, greater number of products and therefore more alternatives), less process costs due to the flow optimisation, less intermediaries that redefine the chain, better stock management. But with all of the above, **why haven't on-line businesses grown so quickly as envisioned? Where is the present and the future of B2B?** There are a number of reasons why the development of e-business is held back

**Lack of technological culture**. An important cultural barrier exists. Information Technologies have not reached the majority of companies of the sector. Many of them ignore Information technology and B2B potential. Possibly, the XXI project of the Spanish Administration who is promoting the expansion of the use of Internet in Spanish society will help to change this reality. This and the new market conditions will push for its incorporation.

But it is clear that a more practical and functional projection of the technological solutions is necessary. There is great distance between the possibilities that B2B solutions are giving and the reality of construction companies. The companies have to move towards a connected economy

progressively which ensures success, at the same time that developed technologies must advance customizing its solutions. **It is time for some humility.**

**Inherited and non-integrated Systems**. The integration is the key to the new economy, and many of the technology investments of companies are not prepared for them, and have not been taken into account by the current e-hubs.

The integration in the value chain is being delayed by the inexistence of mature communication standards. This bottleneck will possibly disappear with the development and incorporation of XML

**Cost**. Operation and work with e-business tools require the implementation of different technologies with different functions, processes and persons. This means that it is no longer a game, and that it is more than just a new website. It is something that will profoundly change the organization. But it is totally necessary. Changes occur, Cheese doesn't stop moving and one must know how to move with it [3].

## 4. Conclusions.

It is clear that as the channel confidence grows, companies will tackle more critical projects, lighting up the operational excellence sector, as well as activities before unimaginable in the rational experimentation sector. Construction e-business will be mature when the entire matrix is complete.

We are called to live in a constantly changing world, and everything moves faster. Innovation (revolution and evolution) is the only road to survival. . To achieve it, companies must become more flexible, **lighter**. They must change **atoms to bits**.

Information technologies, Internet principally, offers opportunities to become lighter though:

- **Efficiency and productivity** through automation, integration and communication. Information transparency (bits) reveals what doesn't add value.
- **New Value** creation through the real possibility of Knowledge Management.

Definitely, company's info-structure will be as important as its infrastructure.

Corporations will have to start their own processes. They have to define their strategy to truly carry out their migration: a targeted transition to renovate and understand, while they're evolving, the potential of the connected economy. **It's the time for a 'silent' Internet migration**, of knowledge management, of innovation. **It's the time for iPlans**.

E- commerce and B2B will also evolve to a mature stage through:

- **New X2X networks**. Interconnections will be created among different specialized portals, which will offer completely integrated services. This will cause the emergence of a new architecture of Inter.-portals related (public and private). The current pay models though transaction probably won't be the principal income source. We well pass on to new services and punctual solutions of high added value.

- **Niche e-business Solutions**. Personalization of current solutions will exist to tackle particular problems in industry. The technologic offers will specialize in each of the business processes of each of the industries, and through the alliances X2X – B2B. Solutions will be tackled for specific needs in the value chain.

- **Standardisation** of the XML as the Internet transactional 'Esperanto' and Middleware development, to help linkages between different current platforms and software.

'Fiascos' that have been taking place lately, such as dot.com companies, show that **it's not the beginning of the end, but the end of the beginning.**

## 5. Reference.

[1] Meyer C., Davis S., "*Blur: The speed of change in the connected economy*". Warner Books (1998)
[2] Hartman A. and Sifonis J., "*Net Ready, Strategies for Success in the e-conomy*", McGraw-Hill , Inc..2000
[3] Johnson S., "*Who moved my Cheese?*", G.P. Putnam's Sons, New York, 1998.