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**Key Capabilities of CIOs and IT Managers
for Strategic Competitive Advantage:
a Qualitative Field Research**

Key Capabilities of CIOs for Strategic Competitive Advantage

A growing stream of studies is concentrating on *IT management value*, i.e. on **how value is created not (only) through IT investment and deployment, but (also, or mainly) through the way IT is idiosyncratically managed** by each specific organization.



The capabilities, behaviors and organizational role of CIOs and IT managers could be crucial for the creation of strategic value.

Research Question:

in the emerging scenario, shaped by e-business and cloud computing, how can the IT manager's capabilities, behaviors and organizational role influence the generation of competitive advantage?

What should IT managers do to allow the best exploitation of IT potentials? What should the organization and the other managers do to allow the CIO and the IT department to get the best out of new technologies? **Some traditional answers may be unsatisfactory**, since the emerging phenomena of globalization, cost pressures, e-business and advanced IT outsourcing are changing the usual landscape of IT managers.

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Answers form literature:

- Effective **management of IT outsourcing contracts** / Service Levels Agreements [Dos Santos, 2012; Han et al., 2008].
- Effective strategic **cooperation with the Top Management Team (TMT)** [Preston and Karahanna, 2009]
- Effective **IT strategic alignment** / effective co-evolution between IT and business strategies [Benbya and McKelvey, 2006; Chen et al., 2010].
- Effective **operational cooperation between IT and business lines** [Bharadwaj et al., 2007; Liang et al., 2010].
- Effective **management of IT-enabled change and innovation processes** [Banker et al., 2006].
- Effective management of **users' IT acceptance and collaboration** [Ross et al., 1996].
- Effective **contribution to knowledge sharing and cooperation** throughout the organization [Piccoli and Ives, 2005].
- Effective contribution to knowledge sharing and cooperation throughout the value chain [Klein and Rai, 2009; Ray et al., 2009].

To answer the Research Question, we conducted an **explorative study** based on interviews to 9 managers from as many Italian organizations.

We sought to select the interviewees on the basis of the **maximum variety criterion**, choosing both small and middle/large size enterprises, both businesses and state-owned companies, belonging to five different industrial sectors.

The interviews were recorded, transcribed and analyzed through coding.

Data on the 9 explorative interviews

Companies	Industrial Sector	Company Size	Role of the Interviewee
Company 1	Utilities	270 employees	CFO
Company 2	ICT	40 employees	CIO
Company 3	ICT	600 employees	CEO
Company 4	Manufacturing	1000 employees	CIO
Company 5	Manufacturing	1610 employees	Marketing CIO
Company 6	ICT	510 employees	CIO
Company 7	Health Care	4200 employees	CIO
Company 8	Manufacturing	50 employees	COO
Company 9	Insurance	650 employees	CIO

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The semi-structured interviews took place from February to May 2012, and were driven by twelve open questions aimed to:

- understand the professional story of the interviewee and his or her relationships with the TMT of the organization;
- enlighten the organization's attitude towards the inter-organizational relationships throughout the value chain, including possible outsourcing agreements;
- encourage the interviewee to tell his or her experiences in both successful and unsuccessful cases where competitive advantage had been pursued based on ICT-enabled innovation;
- understand the interviewee's opinion about how the role of ICT manager is evolving in the emerging scenario.

Research Outcomes

We used Atlas.ti coding options to classify the relevant capabilities, behaviors and organizational roles of IT managers according to our interviewees, whilst we used memos to develop reflections about the issue: how is the role of the CIO / IT manager evolving in today's scenario?

- All the interviewees agreed that the ICT management roles are undergoing important changes, driven by phenomena such as e-business, advanced IT outsourcing and growing cost pressures.
- *“Until recently, ICT just served the organizational structure to make it work... now, it is needed to face the market”* the interviewee from Company 9 said, highlighting the impact of e-business.

Research Outcomes (follows)

- According to the interviewee from Company 6, who discussed thoroughly the impact of advanced outsourcing and cloud computing, these strategic sourcing models *“imply new and specific competences within the outsourcee’s organization, and then Supplier Management and Project Management skills become most important for the IT managers”*.
- In fact, *“even if software development is outsourced in our company, control remains in-house, in terms of quality checking, testing, releasing, training and feedback collection”* (Company 7).
- The IT manager is then *“an IT buyer and a manager of human and technical resources... a manager of people mainly. Internal people and external suppliers”* (Company 4).

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Research Outcomes (follows)

- Cost pressures were mentioned as an often harassing concern for CIOs, who complain that *“TMT managers tend to allow funding only for specific projects they believe in, but they often don’t catch the whole picture and do not understand that IT is not just a sum of projects, it is the nervous system without which nothing could work”* (Company 7).
- As the use of new technologies becomes more and more widespread, and their strategic role is more and more evident, TMT members tend to take decisions themselves as for IT strategies. CIOs often claim that many IT failures *“may result from wrong choices by the CEO who often lacks the competences needed to effectively decide between different possible IT investments”* (Company 9).
- In other words, it seems that we are going towards an **hybridization**, where both the other CXOs feel capable to contribute to decisions about IT strategies, and CIOs feel capable to contribute to business decisions: *“The future CIO should be able to propose the solution, instead of just undergoing it; that’s why he/she should thoroughly know his/her company’s business and be involved in the Board”* (Company 5).

Research Outcomes (follows)

- There is then wide consensus on the fact that **the role of IT manager as it was traditionally understood is going to fade**, because the “old” competences are being subsumed by IT outsourcers, whilst the “new”, emerging competences are more blurred and shared with the other managers. In certain cases, this trend is perceived as threatening; for example, according to the manager from Company 9, the IT manager is sometimes *“in a precarious condition, in which it is impossible for him/her to provide for the future, and even to understand the present”*.
- In other cases, this trend is more positively seen. For example, the manager from Company 5 claimed that the IT manager should not be external to business processes, but there should be an IT manager *“resident in each specific department (purchase, sales, production, etc), so that the IT department is not a separated structure any more, but keeps a foot in each core business process. It should physically be inside the processes, and not just behave as a separated entity which sometimes discusses with the users”*: in other words, a **matrix organizational design** is considered a possible solution for the IT management of the emerging era.

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Outcomes of the interviews' coding process	N	Identified Factor -Axial Code	Code Description: in order to contribute to performances and competitive advantage, the CIO / IT manager should be...	Occurr.	no. of interv.
	1	Strategic Support	Capable to effectively support the organization's competitive strategies	32	7 (77.7%)
	2	Infrastructure Reliability	Capable to provide a reliable, secure, standardized and scalable infrastructure (hardware&software)	28	8 (88.8%)
	3	Relationships with the Line Managers	Capable to build collaborative relationships with line managers and with the other departments of the organization	24	7 (77.7%)
	4	Cost Efficiency	Capable to effectively contribute to cost reduction and efficiency	22	5 (55.5%)
	5	Strategic Involvement	Actively involved in strategic decisions	21	6 (66.6%)
	6	Innovation Promoter	An active promoter of innovation at the organizational level	19	7 (77.7%)
	7	Mgmt of IT Providers	Effective in managing contracts and inter-organizational relationships with IT outsourcers and providers	19	8 (88.8%)
	8	Mgmt of IT Users	Capable to build collaborative relationships with ICT users and to enhance technology acceptance	18	9 (100%)
	9	Involvement in Product Innovation	Actively involved in product/service innovation processes	15	6 (66.6%)
	10	Relationships with the Value Chain	Capable to contribute to good inter-organizational relationship throughout the value chain	12	9 (100%)
	11	Involvement in Customer Satisf.	Actively involved in customer satisfaction / customer loyalty initiatives	8	4 (44,4%)
	12	Direct Report	A direct report of the CEO or General Manager	6	5 (55.5%)
	13	Contribution to Reputation	Effective in contributing to the organization's image and reputation	6	4 (44,4%)
	14	SW Customization	Effective in managing the customization of the organization's software	6	6 (66.6%)
15	Professional Networking	Actively involved in Conferences, workshops and IT professional networks	4	3 (33,3%)	

Conclusions

We found that the CIO is perceived as bound to change towards more hybridized roles, whilst the IT department structure is perceived as evolving towards a much deeper cooperation with external partners and with other departments of the organization; this may imply, for example, a matrix organizational re-design.

Moreover, our interviews led to the identification of 15 features of the CIO/IT manager, that are perceived as important or crucial for the generation of competitive advantage. Most of these features imply outstanding relational capabilities on the part of the IT managers.

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Thank you for your attention!