
Orchestrating Organisational Changes for Corporate Sustainability

Overcoming Barriers to Change

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Corporations are increasingly recognising their role in helping to make societies more sustainable. To incorporate sustainability principles into their systems and activities, companies have developed and fostered the development of a variety of voluntary efforts. In many cases these efforts have been limited by focusing on one particular sustainability issue, offering 'hard' technocentric solutions, or not being effectively integrated into organisational change processes. This paper offers a perspective to help 'orchestrate' organisational change to incorporate and institutionalise corporate sustainability (CS). A model is proposed that focuses on helping the move from the status quo to a more sustainability-oriented state, in an iterative process. The model is used to analyse three case studies. In this process, the CS drivers promote change. However, their efficacy is blocked by barriers to change. The use of appropriate strategies is essential to overcome the barriers throughout the organisation (including individuals and groups) and their respective attitudes, making CS part of the institutional framework, helping to maintain stability and facilitate CS institutionalisation.

- | Corporate sustainability
- | Organisational change
- | Barriers to change
- | Strategies to overcome barriers to change

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INCREASINGLY, CORPORATIONS AND THEIR LEADERS are recognising the relations and inter-dependences of economic, environmental and social aspects (CEC 2001; Elkington 2002) and their short-, long- and longer-term effects (Lozano 2008b): the four dimensions of sustainability. Corporate interest to contribute to sustainability is evidenced by over 7,700 companies in 130 countries (UNGC 2010) that have signed the UN Global Compact (UNGC 2008).

Environmental and social concerns and costs (refer to DeSimone and Popoff 2000 for examples) have been instrumental in serving as catalysts for the development and rapid growth of sustainability-oriented initiatives, tools and approaches (such as life-cycle assessment, eco-efficiency and corporate social responsibility) that go beyond compliance and legal requirements (Daily and Huang 2001; Robert *et al.* 2002; Dunphy *et al.* 2003). During the last three decades, corporate voluntary initiatives have been switching from 'end-of-pipe' solutions to whole-system approaches, by changing products, processes and systems, so that waste is minimised, where resources are used more efficiently and effectively, in almost closed loops (McIntosh *et al.* 1998). These voluntary initiatives have served as frameworks for corporations in contributing to helping societies become more sustainable. However, the majority of the efforts described in the literature have focused on integrating economic and environmental aspects, and more specifically on 'hard' technocentric solutions (Lozano 2012), such as reducing impacts or improving efficiencies and effectiveness, often for individual processes or firms (Korhonen 2003). As Lozano (2012) discusses, the initiatives and tools have focused mainly on management and strategy, operations and processes, and assessment and reporting, but have tended to neglect organisational systems and how to change them.

There have been some calls for changes in 'soft' issues, such as in philosophies and management practices (DeSimone and Popoff 2000; Dobers and Wolff 2000; Doppelt 2003a, b; Dunphy *et al.* 2003). Despite this, relatively few organisations have successfully adopted and institutionalised such changes (Doppelt 2003a) for corporate sustainability (CS).

For the purpose of this article, CS should be understood as:

Corporations' continuous contributions to sustainability equilibria, which include the economic, environmental, and social dimensions of today, as well as their inter-relations within and throughout the time dimension (i.e. the short-, long-, and longer-term). This is done through addressing the company's system: operations and production, management and strategy, organisational systems, procurement and marketing, and assessment and communication (Lozano 2012).

This paper starts by presenting a model to help orchestrate organisational change for CS, followed by an overview of three case studies, an analysis of the data from the case studies, a discussion of the findings and, finally, the conclusions and recommendations to company leaders.

Orchestrating organisational change for corporate sustainability

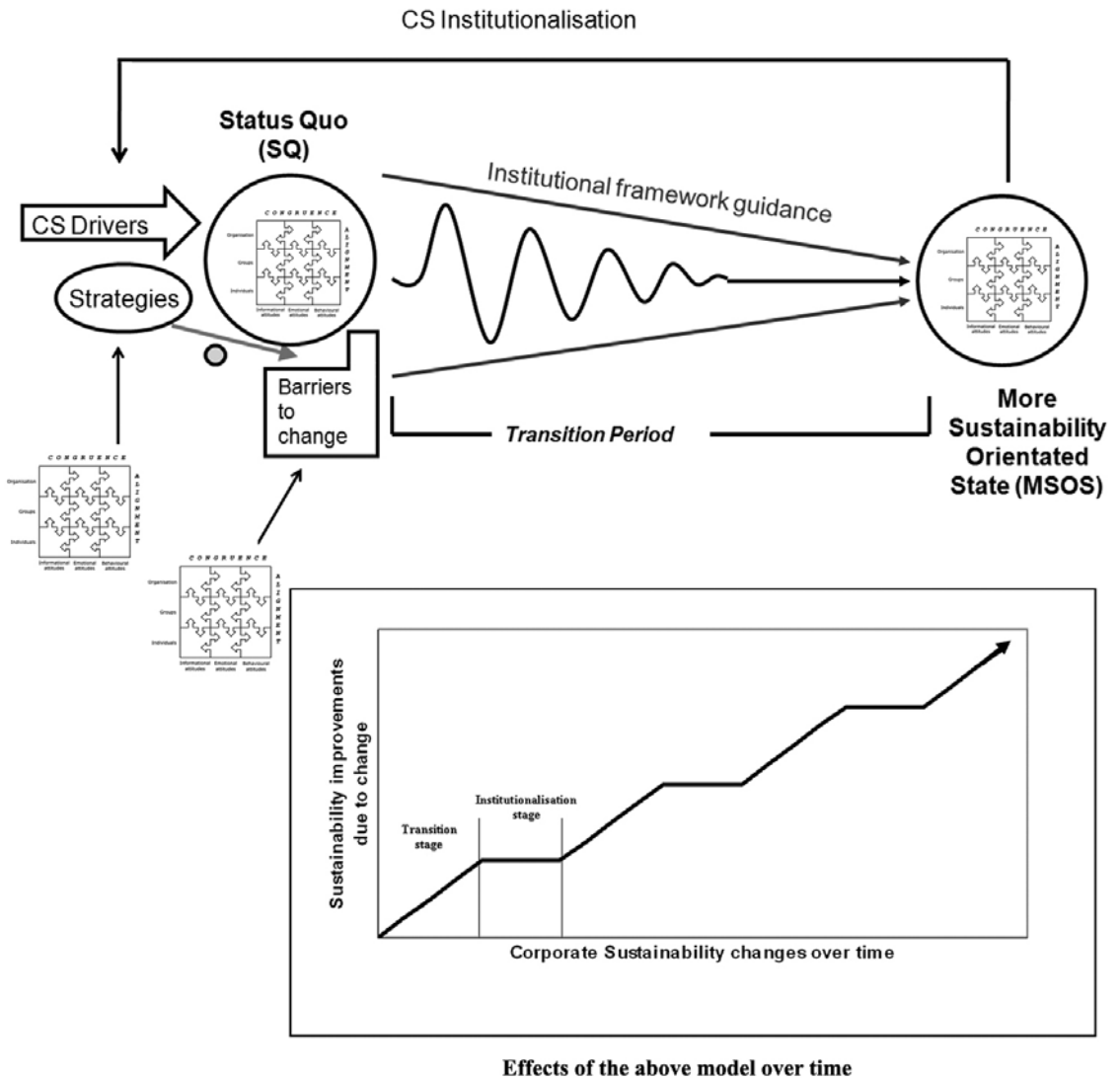
Different authors have proposed ways in which to pursue CS; some of these include: moving towards clean technology (Hart 1997); switching from providing products to services, framed by environmentally friendly practices (McIntosh *et al.* 1998), so-called *solutions-based* business models (Lovins *et al.* 2000); integrating social costs, environmental externalities and resource data into financial accounts (Reinhardt 2004); integrating structural elements when planning strategic behaviour (Quazi 2001); and through acquiring new knowledge, taking actions and facilitating networking (Clarke and Roome 1999). Most of the authors, with the exception of Doppelt (2003a), Dunphy *et al.* (2003) and Lozano (2009), do not examine how to apply organisational change theory to CS, nor do they explore how to institutionalise CS in the company's system.

In order to achieve long-lasting changes and institutionalise CS, current corporate 'business-as-usual' cultures (Korhonen 2002), based on neo-liberalism, need to be challenged (Rosner 1995; Doppelt 2003a). This needs to go beyond technological or managerial systems changes, which are unlikely to alter a company's deeply rooted culture (Doppelt 2003a).

Lozano (2009) proposes that internally planned, or better labelled, orchestrated change, based on proactivity and collaboration, offers a better option to companies wishing to engage with sustainability. Orchestrated change can disrupt the status quo (SQ) and help move towards a more sustainability-orientated state (MSOS), in a continuously iterative process. In this orchestration, the entire system and its elements (individuals, groups and the company), as well as their respective attitudes, need to be addressed. Luthans (2002) argues that attitudes can be broken down into three basic components: **informational**, the beliefs and information that the individual has about the object; **emotional**, how the person feels or is affected by (positive, neutral or negative) the object or idea; and **behavioural**, the person's tendencies to behave in a particular way toward the object or idea. The attitudes categorisation can also be applied to groups and to the company as an organisation.

As with other types of change, leadership and the institutional framework are key in helping to steer and operationalise alternative approaches and change towards CS (Doppelt 2003a). Leadership can create leverage to break from the SQ (thus facilitating CS incorporation), while the institutional framework (with sustainability as its leitmotiv) can help to maintain stability during the changes, and thus facilitate CS institutionalisation. This change process is shown in Figure 1; the bottom right part shows that with each iteration the company becomes more sustainability orientated.

Figure 1 Orchestrating change for corporate sustainability model
 Source: Lozano 2009



Overview of the case studies

Three companies were selected for in-depth case studies. The companies, although from different industrial sectors, share the following common characteristics: they are publicly traded corporations; they sell their products and services to other companies and not directly to consumers, which lowers their public exposure; they are market leaders within their sectors and consolidated companies within mature industries; they have an engineering-based culture; they are large corporations with worldwide operations, where change usually takes considerable time to accomplish; they have been in business for many decades; and have been engaged in CS efforts for several years (e.g. through publishing sustainability reports).

Table 1 presents a summary of the corporations selected for the case studies. Table 2 shows the details of the interviews with company employees from each case study. The following paragraphs present an overview of the selected case studies.

Grupo IMSA

Grupo IMSA, hereafter referred to as 'IMSA', was founded in Mexico in 1936. In 2007 IMSA was sold to Ternium S.A. Before the sale, the company was controlled by a minority shareholding. It had its HQ in Monterrey, Mexico, and has manufacturing and distribution operations in Mexico, USA, Europe and Central and South America. It was divided into three major groups: (1) processed steel; (2) steel and plastic products for construction; and (3) aluminium products. In 2005 its income was over US\$3.6 billion; 50% of the income was generated outside of Mexico (Grupo IMSA 2007). In 2005 the company had 12,010 employees (Grupo IMSA 2005).

Johnson Controls Inc.

Johnson Controls Inc., hereafter 'JCI', was founded in 1885 in Wisconsin, USA (JCI 2005, 2006a). The company is the largest producer of batteries in North America, and one of the largest manufacturers of automotive parts in the world (JCI 2006a). JCI is divided into three groups. The 'interior experience group' provides seating, overhead systems, electronics, floor consoles, cockpits and door systems (JCI 2006b). The 'power solutions group' produces lead-acid batteries and next-generation batteries (nickel-metal-hydride) for fuel-efficient hybrid-electric vehicles (HEVs) (JCI 2006a, b). The 'building efficiency group' focuses on designing, producing, marketing and installing systems that monitor, automate and integrate building operating equipment, and environmental conditioners (JCI 2005). In September 2006 the company had operations in 52 countries, with over 250 locations (JCI 2006a). JCI's corporate and batteries HQs are located in Wisconsin; the controls HQs are in Milwaukee, Wisconsin

and Brussels, Belgium; and the automotive group HQs are in Michigan, USA and Burscheid, Germany (JCI 2004). In 2006, the company had 136,000 employees, of which approximately 75,000 were hourly paid, and 61,000 salaried (JCI 2006a).

Industrias Peñoles, S.A. de C.V.

Industrias Peñoles, S.A. de C.V., hereafter 'Peñoles', was founded in Mexico in 1887 and started trading its shares on the Mexican Stock Exchange in 1968. Peñoles is one of Mexico's main non-renewable natural resource industries, specialised in mining, smelting and refining of non-ferrous metals, and in the production of inorganic chemicals. It is the world's largest producer of refined silver, metallic bismuth and sodium sulphate (Peñoles 2006), and it is Latin America's top producer of refined gold and lead (Peñoles 2004). Peñoles is part of Grupo Bal, a privately held and diversified Mexican consortium (Peñoles 2005). In 2006, the company had 7,576 employees (Peñoles 2005).

Table 1 Corporations selected to be case studies

	IMSA	JCI	Peñoles
Location	Monterrey, Mexico	Wisconsin, USA	Mexico City, Mexico
Industry	Metals	Manufacturing and metals	Mining
Main products	Steel	Automotive systems, building controls and car batteries	Non-ferrous metals and chemicals
Years engaged in CS (according to the company leaders)	6	10	7
First sustainability report	*	2003	2003**
Corporate sustainability organisation of which they are a member	WBCSD and CESPEDS (Mexican chapter of WBCSD)	Business Roundtable/ Climate RESOLVE; Corporate Environmental Enforcement Council (CEEC)	CESPEDES

* The company includes a sustainability section in its annual report

** The company published its first environmental report in 2001, but in 2003 changed the title to sustainability report

Table 2 Details of interviewees

Company	Name	Position
IMSA	Ruben Rodriguez	Human Resources (HR) Director
	Eugenio Clariond	President and CEO
JCI	Rebecca Andrew	Senior ESH/Sustainability Adviser
	Mark P. Chatelain	Manager, Blue Sky Program
	Jeff Werwie	Director Environmental Control
Peñoles	Mario Arrellin	Executive Vice President Finance, Planning & IT
	Mario Huerta	Corporate Manager of Environmental Planning and Development
	Octavio Alvidrez	Executive Vice President Exploration, Engineering and Construction
	Rafael Rebollado	HR director

Methodology for the analysis of the case study data

The interviews listed in Table 2 were analysed to detect the drivers to change, barriers to change and strategies to overcome the barriers to change. The orchestrating change for corporate sustainability model (see Fig. 1) was applied to examine how each company had addressed CS change. The identified barriers to change and strategies to overcome them were analysed with the help of the Multi-dimensional Sustainability Influence Change (MuSIC) memework (Lozano 2008a).¹ The memework analyses were made using a relative percentage of the barriers to change and strategies to overcome them in respect to the total barriers to change identified. The total numbers of CS barriers to change and strategies to overcome them are presented in Table 3 and Table 4, respectively.

¹ Memework is a term coined by the author. It is a hybrid between a model and a framework. It draws from the meme concept which Richard Dawkins (1978) defines as ‘... a noun that conveys the idea of a unit of cultural transmission, or a unit of imitation’. Memes are propagated by leaping from brain to brain. A memework has the aim of helping to transfer memes: that is, helping to transfer ideas or units of imitation throughout a system, from an individual to another, to and among groups and organisations.

Table 3 Total numbers of barriers to change identified

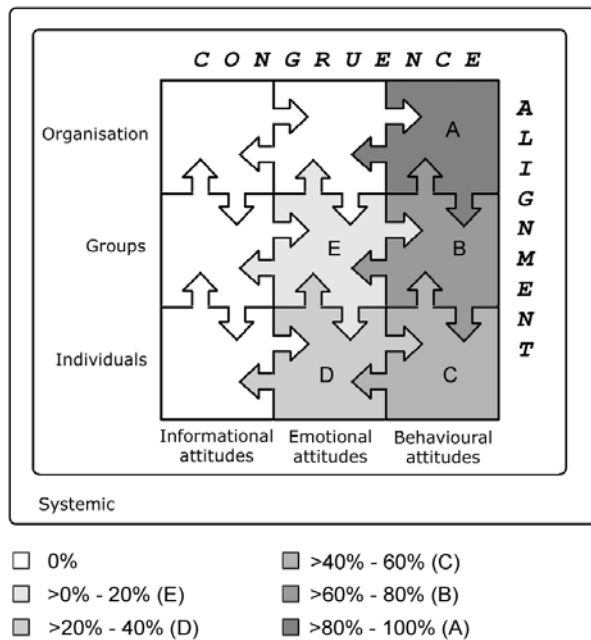
System level	Attitude			
	Informational	Emotional	Behavioural	Systemic
Individuals	7	25	18	
Groups	0	1	4	
Organisation	19	22	27	16

Table 4 Total numbers of strategies to overcome barriers to change identified

System level	Attitude			
	Informational	Emotional	Behavioural	Systemic
Individuals	7	6	15	
Groups	1	1	3	
Organisation	5	8	40	10

Figure 2 MuSIC memework example of relative percentages of barriers to change and strategies

Source: Lozano 2009



The barriers to change and strategies are grouped as (shown in Fig. 2): **non-existent** (0%), **very low** (between 1% and 20%), **low** (between 21% and 40%), **medium** (between 41% and 60%), **high** (between 61% and 80%), and **very high** (more than 80%).

Case study findings

Table 5 shows the CS internal and external drivers mentioned during the interviews. The findings show that leadership is recognised as the main CS internal driver, while regulation and legislation is recognised as the main external driver.

Table 5 CS drivers mentioned by the interviewees

Internal drivers	Company where the driver was mentioned
Leadership	IMSA, Peñoles
Employees' shared values	IMSA
Resources and cost saving	IMSA
Company's culture	JCI
Publishing sustainability reports	JCI
Moral and ethical obligation	Peñoles
Champions	Peñoles
External drivers	
National government/regulation and legislation	IMSA, Peñoles
Raising students' awareness	IMSA
Customer demands and expectations	JCI
Access to resources	Peñoles
Society's increasing awareness	Peñoles
Collaboration with external organisations	Peñoles
Environmental and social crises	Peñoles

Table 6 presents the barriers to change reported in the three case studies (where ignorance is considered as a key barrier in two of the case study companies). The common points in the three case studies with respect to CS barriers to change show that there is:

- ▶ No awareness of group informational barriers

- ▶ Almost no awareness of group behavioural and organisational informational and emotional barriers
- ▶ Very low awareness of individuals' emotional barriers and behavioural barriers of individuals and the organisation
- ▶ Discrepancy in the recognition of individuals' informational barriers and groups' emotional barriers between the case studies

These findings show that there is a limited perspective on organisational systems as a whole and limited recognition of the different attitudinal effects on the barriers. In two of the case studies there is recognition of individuals' and organisational barriers to change, while in the other case study there is also recognition of groups' barriers to change.

Table 6 Barriers to change identified during the interviews

	Change barrier	Attitude	Company
<i>Individual</i>			
Level 1	Ignorance	Informational	JCI, Peñoles
	Lack of awareness	Informational	Peñoles
	Lack of information	Informational	Peñoles
	Lack of ability to face the problems	Informational	Peñoles
	Misunderstanding the information	Informational	Peñoles
Level 2	Fear of losing core values	Emotional	JCI
	Fear of not belonging	Emotional	JCI
	The individuals themselves	Behavioural	Peñoles
	Not seen as priority	Emotional	IMSA
	Seen as a threat to company's core values, mainly from a lack of understanding of the concept	Emotional	JCI
	Natural human resistance towards change	Behavioural	Peñoles
Aspect 1	Laziness	Behavioural	IMSA
	Lack of time	Emotional	
	'Why do something if we're not doing anything wrong?'	Behavioural	Peñoles
<i>Group</i>			
	It is difficult to see the connection or relate it to everyday activities or jobs especially in functions that have no evident connection to CS	Emotional	Peñoles
	Keeping feuds	Behavioural	Peñoles

	Change barrier	Attitude	Company
<i>Organisational</i>			
Managerial	Not yet seen as adding value to the company	Informational	JCI
	Middle management short-term constraint	Informational	JCI
	Not seen as related to the financial bottom line	Informational	Peñoles
	Seen as a threat to company's core values, mainly from a lack of understanding of the concept	Emotional	JCI
	Managing change	Behavioural	JCI
	Not being specifically asked for, thus no resources should be allocated	Behavioural	JCI
	Considered as a fad	Behavioural	JCI
Organisational	Difficult to measure the effectiveness of the implementation	Systemic	Peñoles
	Lack of holistic focus in operations	Systemic	Peñoles
Supportive	Lack of resources	Behavioural	IMSA
	Lack of available technologies to produce more sustainable products	Behavioural	IMSA
Historical	Operative profile of the company	Behavioural	Peñoles
	Considered as a fad	Behavioural	Peñoles

Table 7 presents the strategies to overcome the barriers to change towards CS found in the three case studies. The common points in the three case studies with regard to CS strategies and approaches applied to overcome barriers to change show that there is:

- ▶ Almost no awareness of individuals' behavioural strategies
- ▶ Very low awareness of organisational behavioural strategies
- ▶ Low awareness of individuals' informational strategies
- ▶ No recognition of strategies to overcome barriers in the other organisational levels and their corresponding attitudes

From the different strategies to overcome change, the ones most mentioned are: education and training, and leadership (identified by all three companies); and education and awareness raising campaigns, communication, linking sustainability to the company's institutional framework, making sustainability part of performance, using Six Sigma, and collaboration with other companies (identified by two companies).

The findings indicate that there is only recognition of individuals' informational and organisational behavioural strategies. There is no recognition of strategies in other organisational unit attitudes. This shows a limited perspective on the organisational systems and limited recognition of the attitudinal effects on strategies to overcome barriers to change.

Table 7 Approaches to overcome barriers to change identified during the interviews

	Strategy or approach	Attitude	Company
<i>Individual</i>			
Level 1	Education and awareness raising campaigns	Informational	IMSA, Peñoles
	Communication to employees	Informational	JCI, Peñoles
	Examples and local activities	Informational	Peñoles
	Education and training	Informational	IMSA, JCI, Peñoles
Level 2	Convincing people, especially business units' leaders	Behavioural	IMSA
	Champions	Systemic	Peñoles
<i>Group</i>			
	Champions	Systemic	Peñoles
<i>Organisational</i>			
Managerial	Firing people	Behavioural	IMSA
	Managing the change	Behavioural	Peñoles
	Awards	Behavioural	JCI
	Adapting external models	Behavioural	Peñoles
	Leadership	Systemic	IMSA, JCI, Peñoles
	Champions	Systemic	Peñoles
	Linking it to the company's institutional framework	Systemic	JCI, Peñoles
	Strategic planning	Systemic	Peñoles
Organisational	Making it part of performance	Behavioural	IMSA, Peñoles
	Extending CS to all functional and business units	Behavioural/ Systemic	IMSA

	Strategy or approach	Attitude	Company
Supportive	Using Six Sigma programmes	Behavioural	IMSA, JCI
	Stakeholder communication and engagement	Behavioural	JCI
	Incentives, rewards and compensations	Behavioural	IMSA
	Providing support and resources	Behavioural	JCI
	Use of technology	Behavioural	Peñoles
External	Collaboration with other companies	Behavioural	IMSA, Peñoles
	Pressure from customers	Behavioural	JCI

The results for each company's memework analyses with respect to barriers to change and strategies to overcome them are presented in: Tables 9 and 10 from IMSA; Tables 11 and 12 from JCI; and Tables 13 and 14 from Peñoles. The CS change processes including the memework analyses and their comparisons are presented in Figure 3 (IMSA), Figure 4 (JCI) and Figure 5 (Peñoles).

Table 8 integrates the findings from the three case studies, where it is possible to group the discrepancies into:

- ▶ No barriers or strategies identified, shown in purple
- ▶ Equal recognition of barriers and strategies, shown in light green
- ▶ More barriers than strategies being recognised, shown in yellow and orange
- ▶ Fewer barriers than strategies being identified, shown in light blue and white

The findings from the three case studies show that there is incongruity between the barriers to change identified and the strategies being applied to overcome them. For example: in IMSA strategies are applied to overcome individuals' informational barriers, but none is recognised; in JCI individuals' emotional, and organisational informational and emotional barriers are recognised, but there are no strategies applied to overcome them; while in Peñoles a wide range of barriers are recognised, but only individuals' informational, organisational behavioural, and systemic strategies are utilised.

Although there are different types of barrier to change recognised in the three case studies, the strategies to overcome the barriers to changes are entirely focused on how individuals learn and how the company behaves. Such incongruence between the identified barriers and the strategies being applied to overcome them may be one of the limiting factors in CS incorporation and institutionalisation.

Table 8 Comparison of the case studies' barriers to change and strategies to overcome them

Level	Attitude	IMSA			JCI			Peñoles		
		Barriers	Strategies	Strategies	Barriers	Strategies	Strategies	Barriers	Strategies	
Individual	Informational	None	Low	Low	Very low	Low	High	Medium		
	Emotional	Very low	None	None	Very low	None	Very low	None		
	Behavioural	Very low	Very low	None	None	None	Very low	None		
Group	Informational	None	None	None	None	None	None	None		
	Emotional	None	None	None	None	None	Very high	None		
	Behavioural	None	None	None	None	None	Low	None		
Organisational	Informational	None	None	None	Very low	None	Very low	None		
	Emotional	None	None	None	Very low	None	None	None		
	Behavioural	Very low	Very low	Very low	Very low	Very low	Very low	Very low		
	Systemic	None	Low	Very low	None	Very low	Low	Medium		

Table colour coding:



No barriers or strategies identified

Equal recognition of barriers and strategies

More barriers (very low) than strategies (none) being recognised

More barriers than strategies being recognised (in different combinations)

More strategies (very low or low) than barriers (none) being recognised

More strategies (medium or low) than barriers (low or very low) being recognised

Table 9 IMSA's barriers to change

	Attitudes							
	<i>Informational</i>		<i>Emotional</i>		<i>Behavioural</i>		<i>Systemic</i>	
	NO.	% OF TOTAL	NO.	% OF TOTAL	NO.	% OF TOTAL	NO.	% OF TOTAL
Individual	0	0%	1	4%	2	11%		
Group	0	0%	0	0%	0	0%		
Organisational	0	0%	0	0%	2	7%	0	0%

Table 10 IMSA's approaches to overcome barriers to change

	Attitudes							
	<i>Informational</i>		<i>Emotional</i>		<i>Behavioural</i>		<i>Systemic</i>	
	NO.	% OF TOTAL	NO.	% OF TOTAL	NO.	% OF TOTAL	NO.	% OF TOTAL
Individual	2	29%	0	0%	1	7%		
Group	0	0%	0	0%	0	0%		
Organisational	0	0%	0	0%	6	15%	2	20%

Table 11 JCI's barriers to change

	Attitudes							
	<i>Informational</i>		<i>Emotional</i>		<i>Behavioural</i>		<i>Systemic</i>	
	NO.	% OF TOTAL	NO.	% OF TOTAL	NO.	% OF TOTAL	NO.	% OF TOTAL
Individual	1	14%	3	12%	0	0%		
Group	0	0%	0	0%	0	0%		
Organisational	2	11%	1	5%	3	11%	0	0%

Table 12 JCI's approaches to overcome barriers to change

	Attitudes							
	<i>Informational</i>		<i>Emotional</i>		<i>Behavioural</i>		<i>Systemic</i>	
	NO.	% OF TOTAL	NO.	% OF TOTAL	NO.	% OF TOTAL	NO.	% OF TOTAL
Individual	2	29%	0	0%	0	0%		
Group	0	0%	0	0%	0	0%		
Organisational	0	0%	0	0%	5	13%	2	20%

Figure 3 IMSA's organisational changes for CS
 Source: Lozano 2009

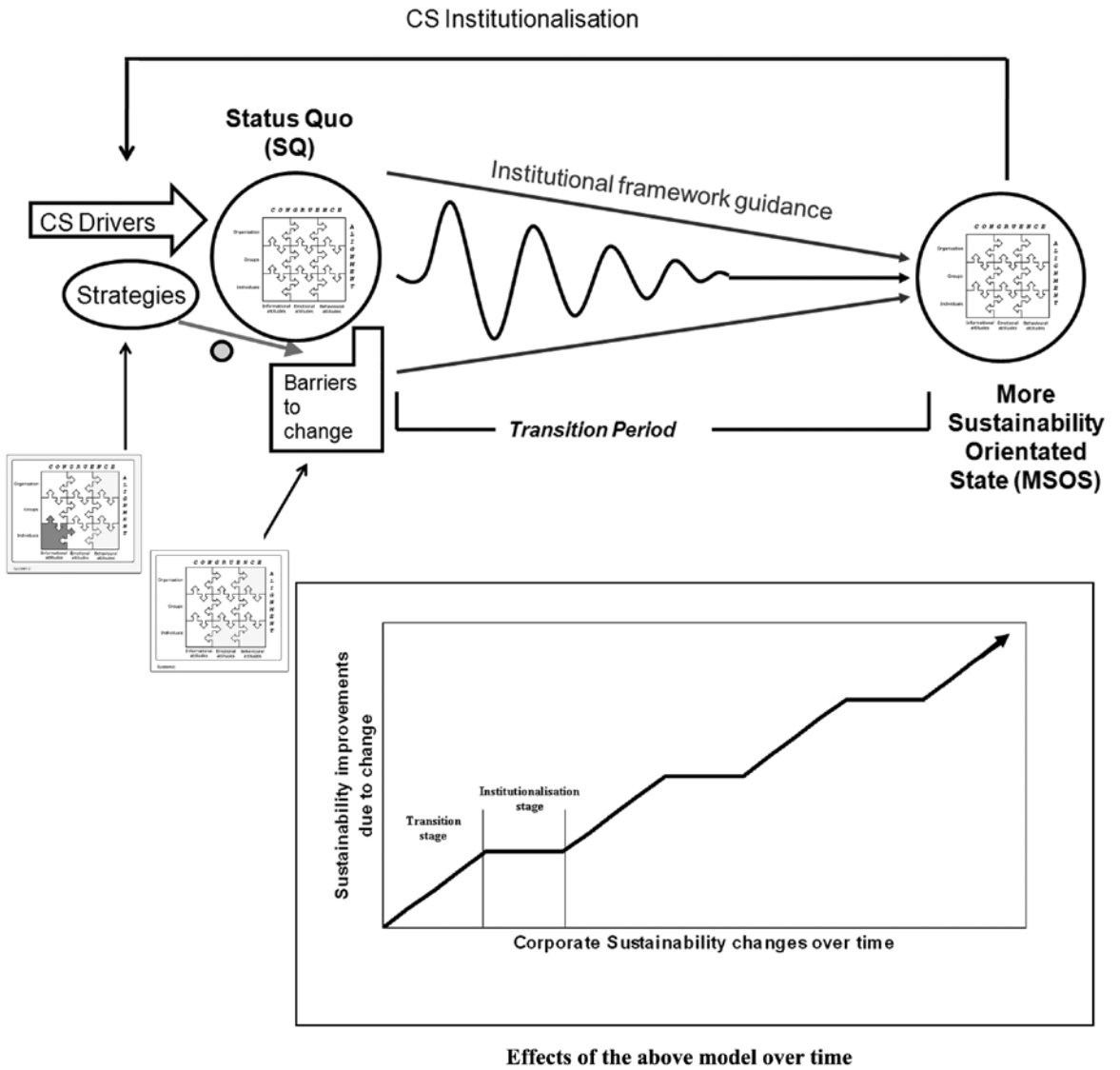
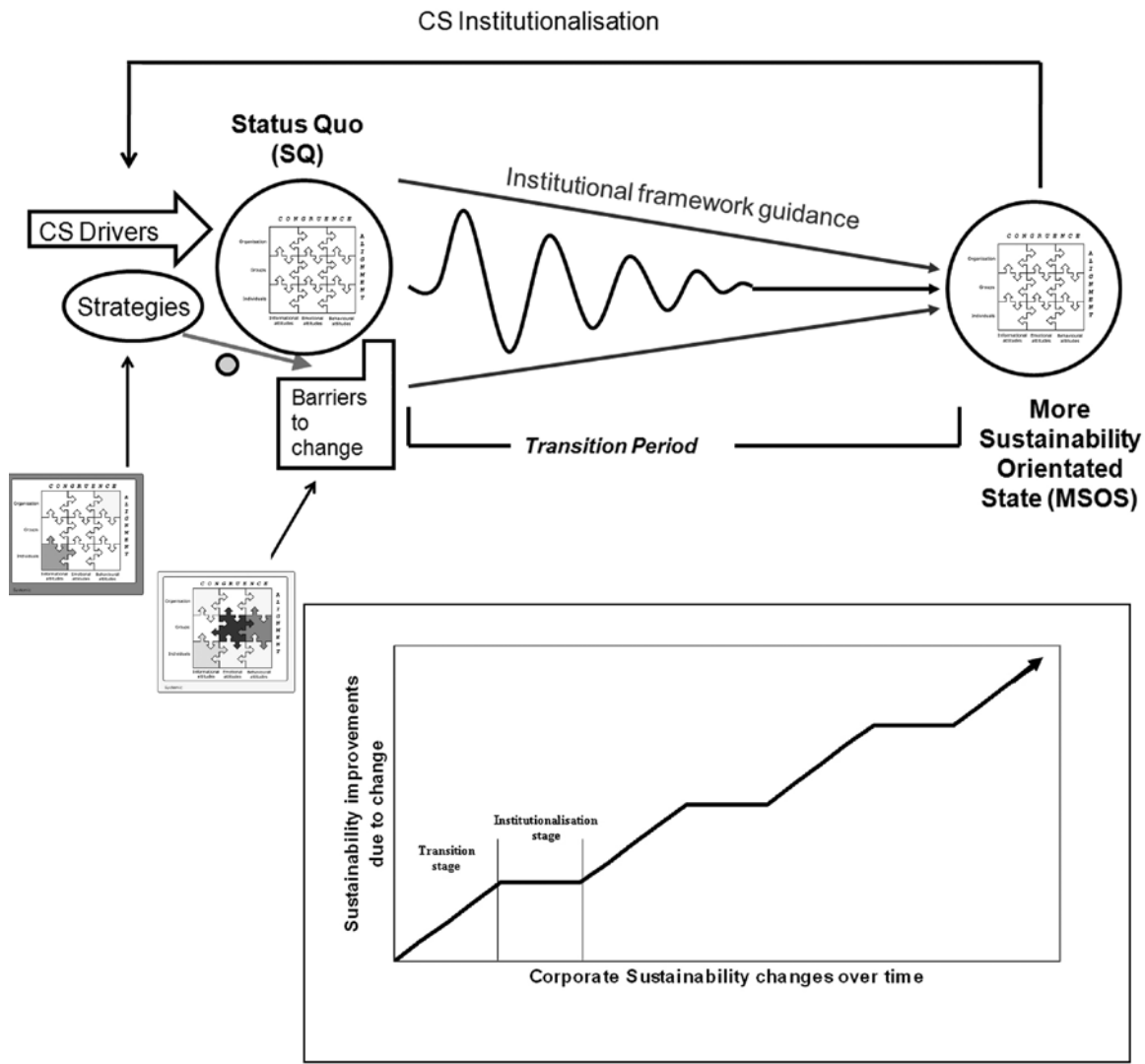


Figure 4 JCI's organisational changes for CS

Source: Lozano 2009



Effects of the above model over time

Table 13 Peñoles' barriers to change

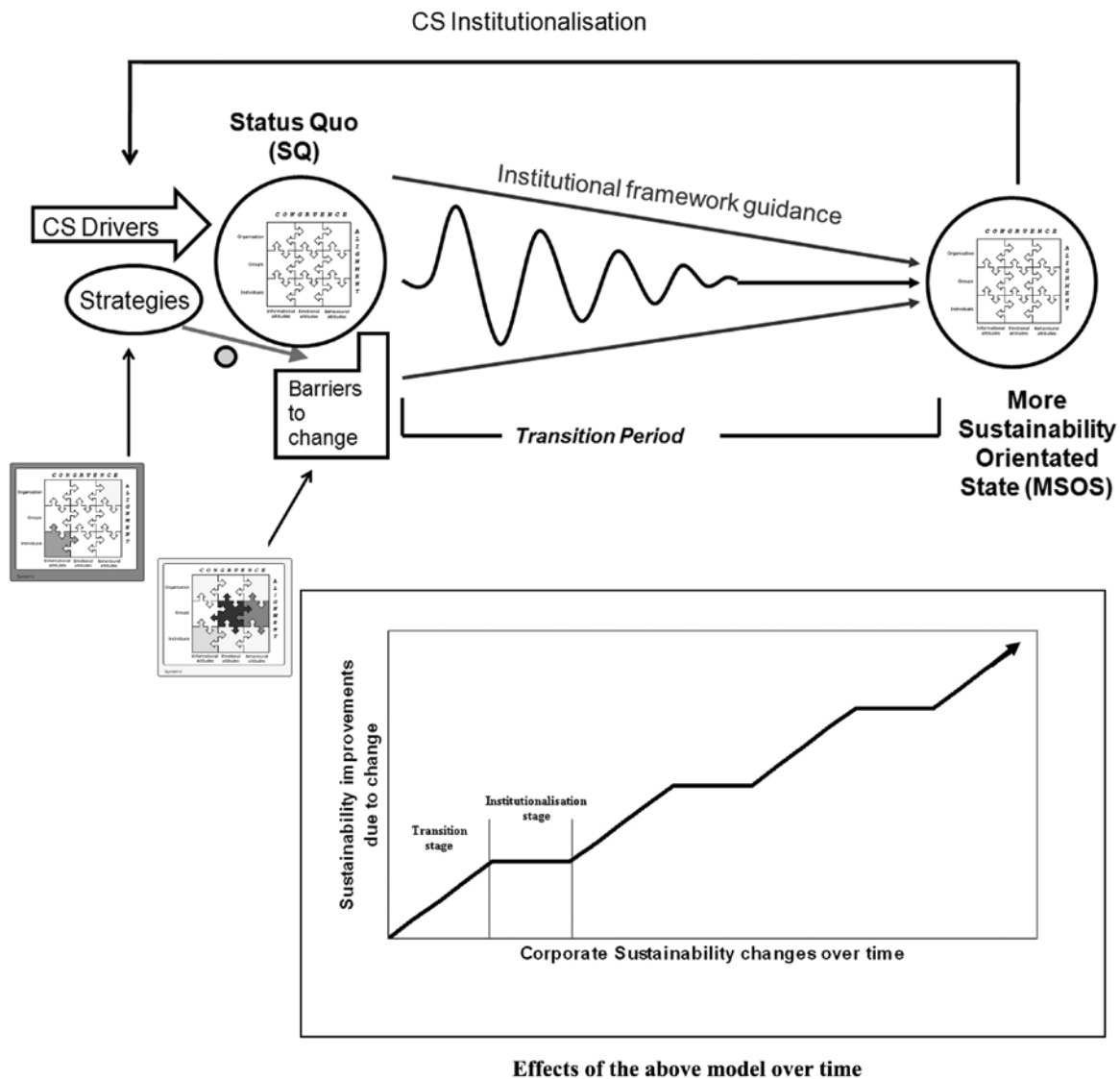
	<i>Informational</i>		<i>Emotional</i>		<i>Behavioural</i>		<i>Systemic</i>	
	NO.	% OF	NO.	% OF	NO.	% OF	NO.	% OF
		TOTAL		TOTAL		TOTAL		TOTAL
Individuals	5	71%	1	4%	3	17%		
Groups	0	0%	1	100%	1	25%		
Organisational	1	5%	0	0%	2	7%	2	13%

Table 14 Peñoles' approaches to overcome barriers to change

	<i>Informational</i>		<i>Emotional</i>		<i>Behavioural</i>		<i>Systemic</i>	
	NO.	% OF	NO.	% OF	NO.	% OF	NO.	% OF
		TOTAL		TOTAL		TOTAL		TOTAL
Individuals	4	57%	0	0%	0	0%		
Groups	0	0%	0	0%	0	0%		
Organisational	0	0%	0	0%	5	13%	4	40%

Figure 5 Peñoles' organisational changes for CS

Source: Lozano 2009



Conclusions and recommendations

Corporations and their leaders are increasingly recognising their role and responsibilities towards the environment and societies in which they operate, today and in the future. This has fostered the development of various corporate voluntary tools and initiatives to address sustainability. Such initiatives have, in general, been based on 'hard' technocentric solutions, with an emphasis on strategy, management, assessment and reporting. However, discussions on organisational systems' changes have been limited. This paper is aimed at offering a perspective to help incorporate and institutionalise CS.

The analyses of the case studies show that internally planned, or better labelled, orchestrated change offers the most proactive and less conflicting option for companies to engage with sustainability. For CS-orientated changes to occur and succeed within an organisation, the CS drivers (internal, such as leadership, and external, such as regulation) need to be recognised and acknowledged. These provide the leverage to temporarily break from the status quo (SQ) to a more sustainability-orientated state (MSOS), in an iterative process. The institutional framework helps to maintain stability during the changes, and thus facilitate CS institutionalisation. The barriers to change may slow, or even block, the drivers' efforts. Identifying and recognising the barriers can help to apply appropriate strategies to overcome them, as opposed to ad hoc measures, serendipity, or relying only on individuals' learning or on how the company behaves. This can help reduce discrepancies, and give a better focus to plan efforts to institutionalise CS. In this orchestration, the individuals, groups and the company and their respective attitudes (informational, emotional and behavioural) need to be addressed.

To better orchestrate organisational changes to incorporate and institutionalise CS in their companies, company leaders must consider: planning and orchestrating CS change; making CS the leitmotiv in the institutional framework, connecting all systems and business functions; identifying CS drivers and barriers to change; and applying a set of strategies that match the different types of barrier to change.

The CS organisational change orchestration has to be integrated harmonically with other sustainability efforts in the company, such as changes in operations and production, management and strategy, organisational systems, procurement and marketing, and assessment and communication.

It is hoped that this article will serve as a base for further research on organisational change management for CS, where a larger sample of companies is assessed.

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