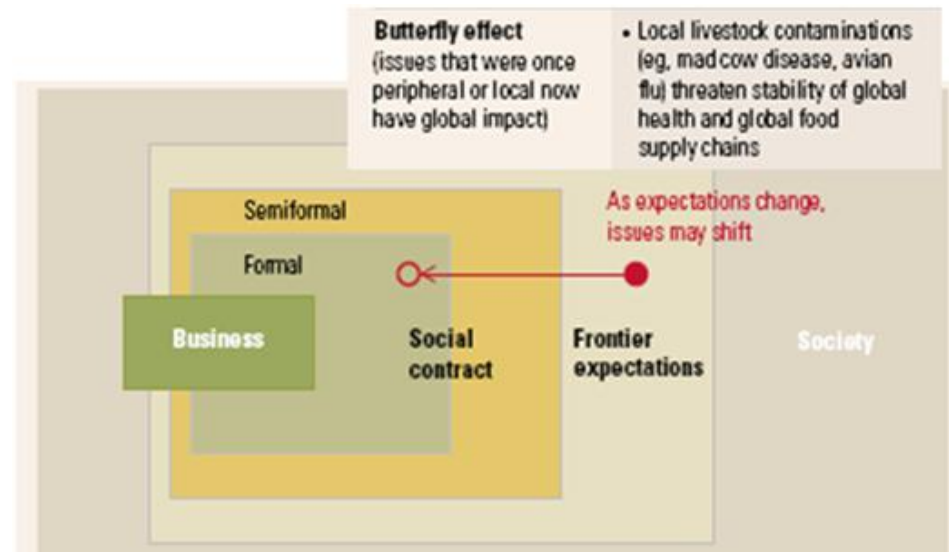
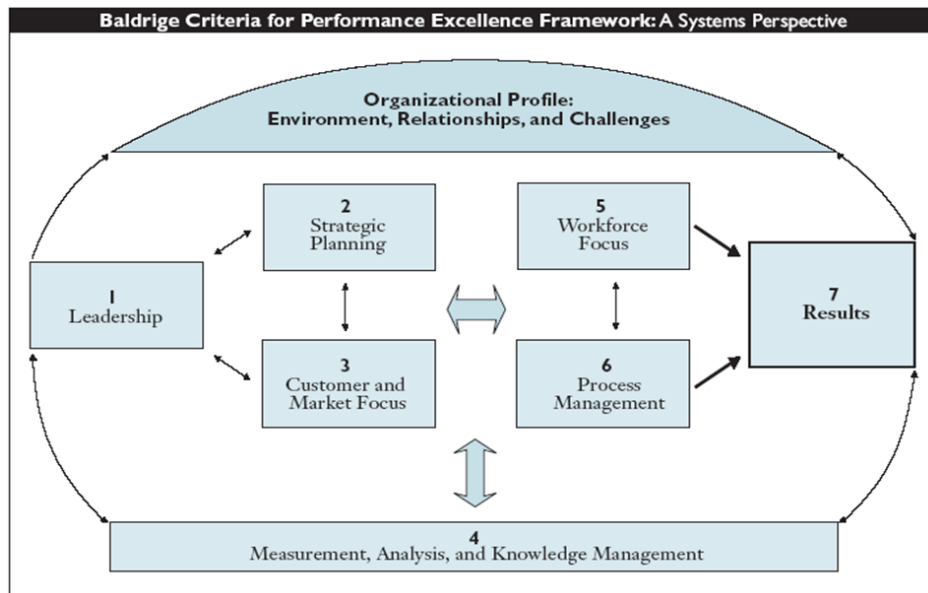
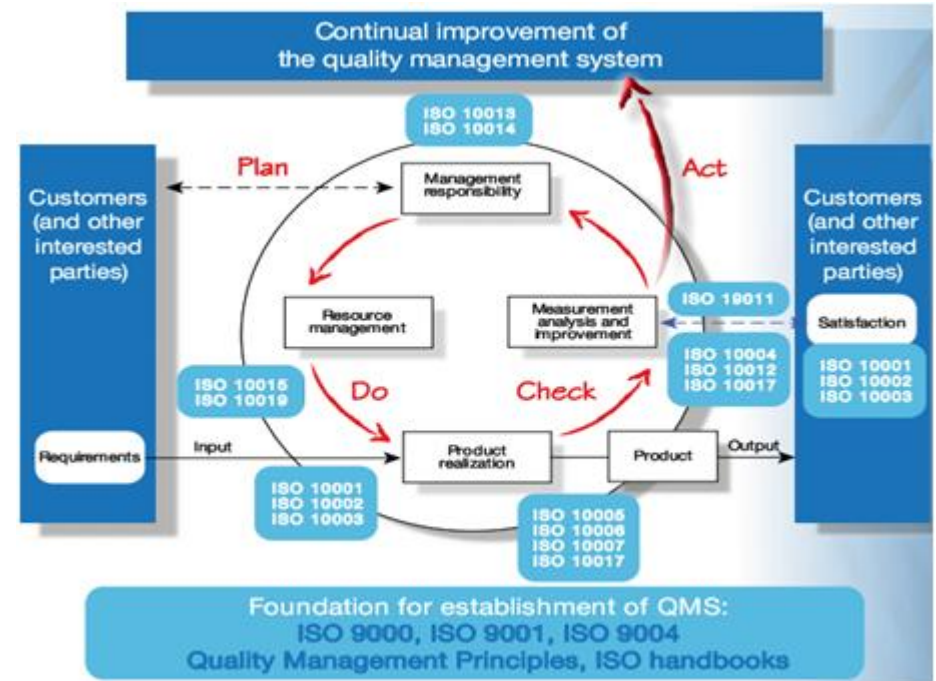
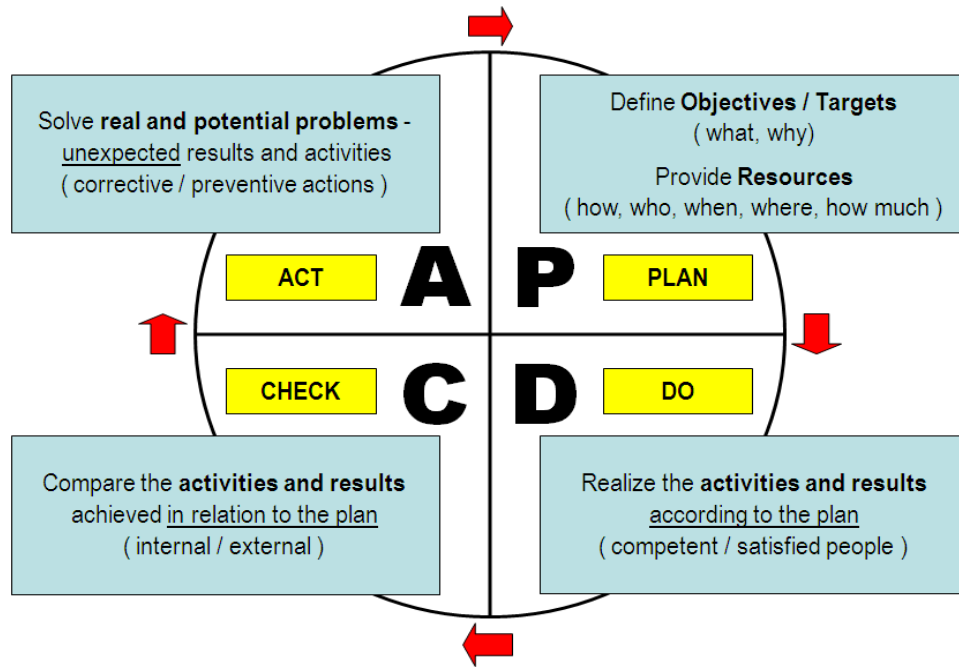


MANAGEMENT

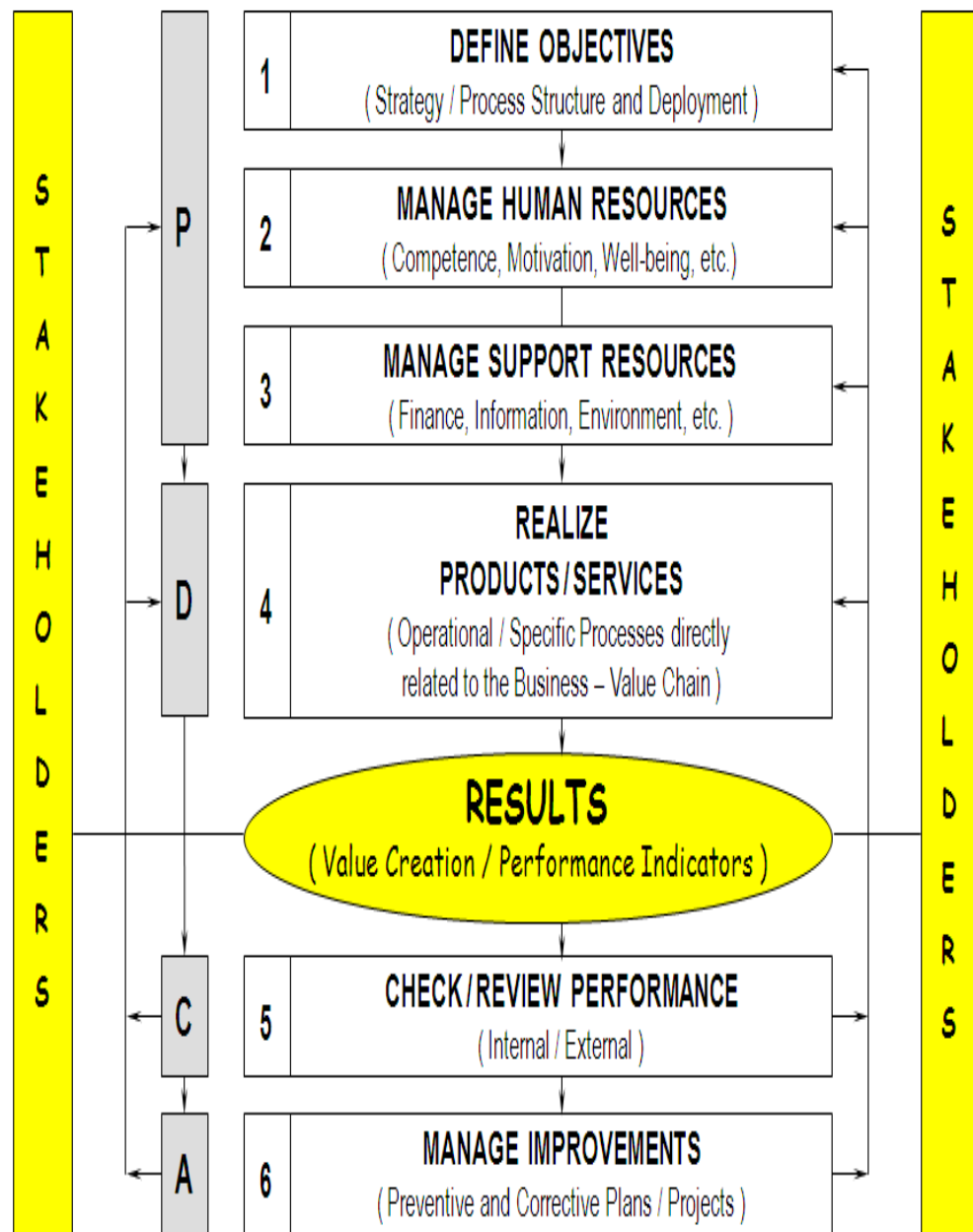
**A social technology applied
to complex systems**

Marcus Vinicius Cotrim Árabe
MIX Hack - October 2010

PDCA MANAGEMENT CYCLE

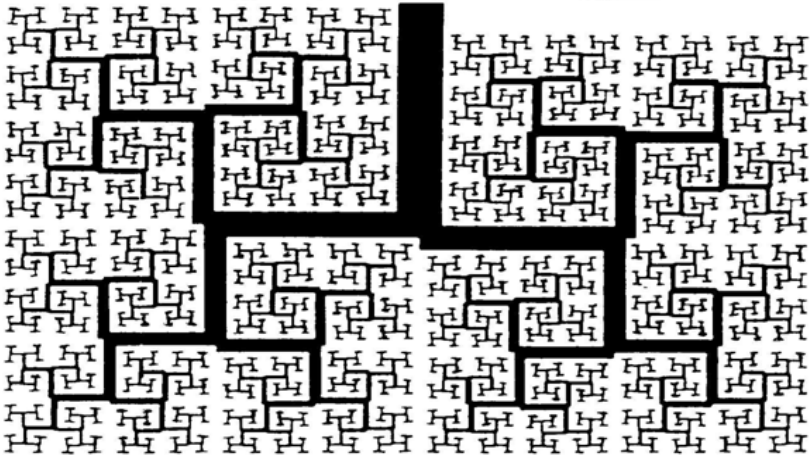
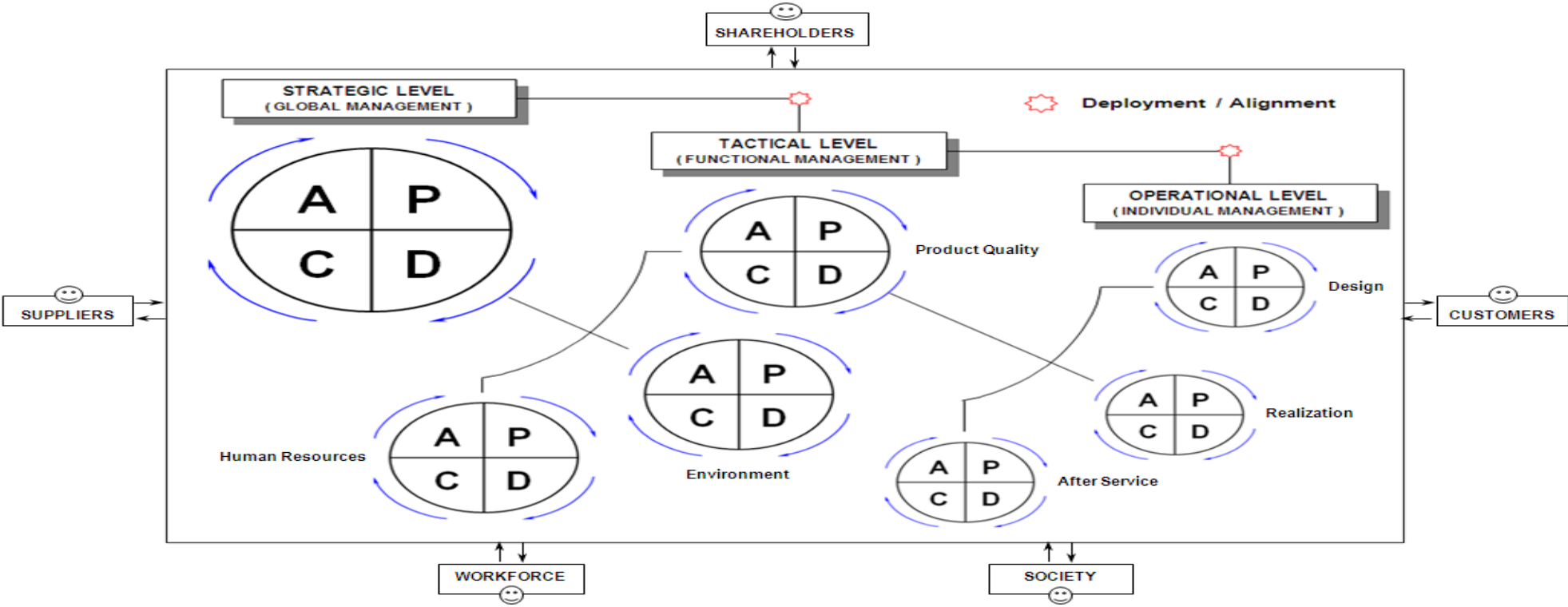


PDCA-BASED MANAGEMENT MODEL

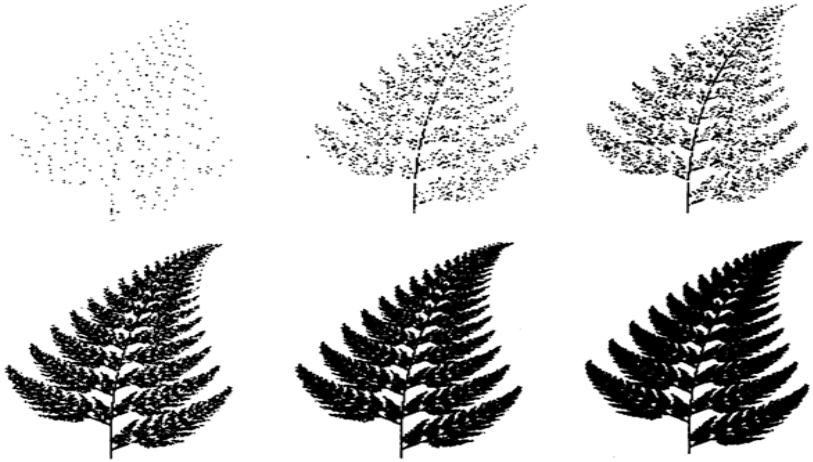


GENERAL COMPARISON BETWEEN PDCA AND OTHER MANAGEMENT SYSTEMS

MGT SYSTEM (PDCA-Based)	ISO 9004	ISO 9001 ISO/TS 16949	ISO 14001	OHSAS 18001	EFQM (Europe)	MBNQA (USA)	FNQ (Brazil)
Stakeholders Results	All	Customers (Autom. Sector)	Society Environment	Workforce	All 6/7/8/9	All 7.1/7.2/7.3 7.4/7.5/7.6	All 8.1/8.2/8.3 8.4/8.5/8.6
1 – Define Objectives	4.1/4.3 5.1/5.2/5.3/5.4 7.1/7.2	4.1 5.1/5.2/5.3/5.4 7.1/7.2	4.1/4.2/4.3	4.1/4.2/4.3	1/2	1.1/1.2 2.1/2.2/4.1 5.2/6.1/6.2	1.1 2.1/2.2
2 – Manage Human Resources	4.1 5.3/5.5 6.2/6.4	4.1 5.3/5.5 6.2/6.4	4.1/4.2 4.3/4.4	4.1/4.2 4.3/4.4	1/3	1.1/1.2 4.2/5.1/5.2	1.1/1.2/5.3 6.1/6.2/6.3
3 – Manage Support Resources	4.1/4.2/5.5 6.1/6.3 to 6.8 7.1/7.4/7.5	4.1/4.2/5.5 6.1/6.3/6.4 7.1/7.4/7.5	4.1/4.3 4.4/4.5	4.1/4.3 4.4/4.5	1/4	1.1/1.2/2.2 4.1/4.2/5.2	1.1/1.2/4.1/4.2 5.1/5.3/7.2/7.3
4 – Realize Products Services	4.1 7.1/7.2/7.3 7.4/7.5	4.1 7.1/7.2/7.3 7.4/7.5	4.1/4.4/4.5	4.1/4.4/4.5	1/5	3.1/3.2 6.1/6.2	3.1/3.2 7.1
5 – Check/ Review Performance	4.1/5.1/5.3/5.6 7.1/7.6 8.1/8.2/8.3/8.4	4.1/5.1/5.3/5.6 7.1/7.6 8.1/8.2/8.3/8.4	4.1/4.4 4.5/4.6	4.1/4.4 4.5/4.6	1 2/3/4/5	1.1/1.2/2.1/2.2 3.1/3.2/4.1/4.2 5.1/5.2/6.1/6.2	1.3/2.1/2.2 3/4/5/6 7.1/7.2/7.3
6 – Manage Improvements	4.1 8.1/8.3/8.5	4.1 8.1/8.3/8.5	4.1/4.5	4.1/4.5	1 2/3/4/5	1.1/1.2/2.1/2.2 3.1/3.2/4.1/4.2 5.1/5.2/6.1/6.2	1.2/1.3/2.2/3.2 4.1/4.2/5.3 6.2/6.3/7.1/7.2



LUNG / FRACTAL MODEL

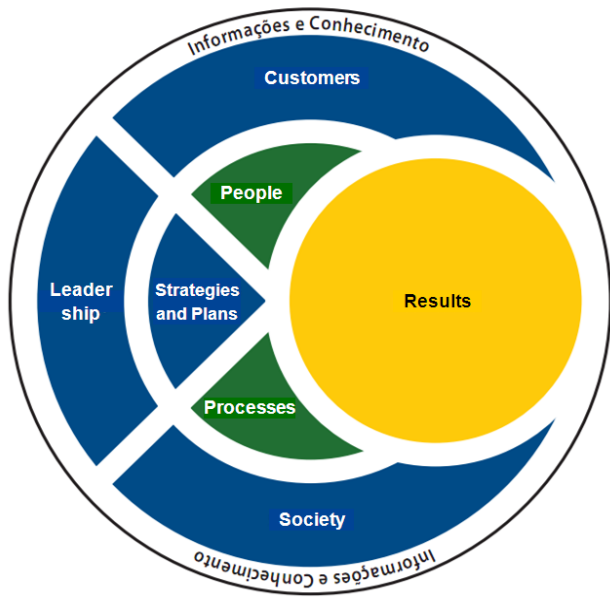


FERN / SELF-ORGANIZING MODEL

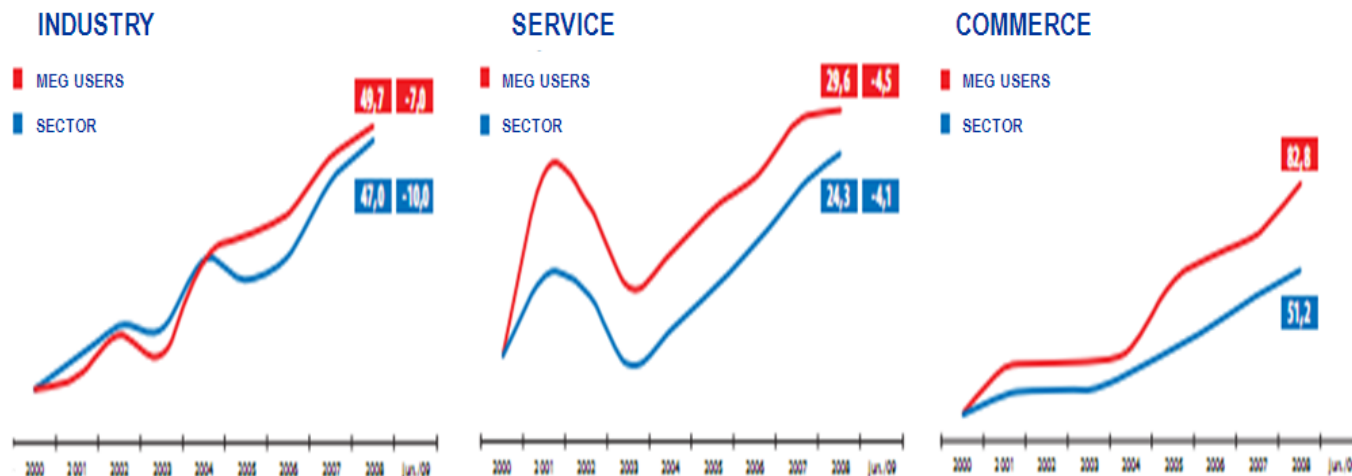
MANAGEMENT EXCELLENCE MODEL (MEG® / FNQ)



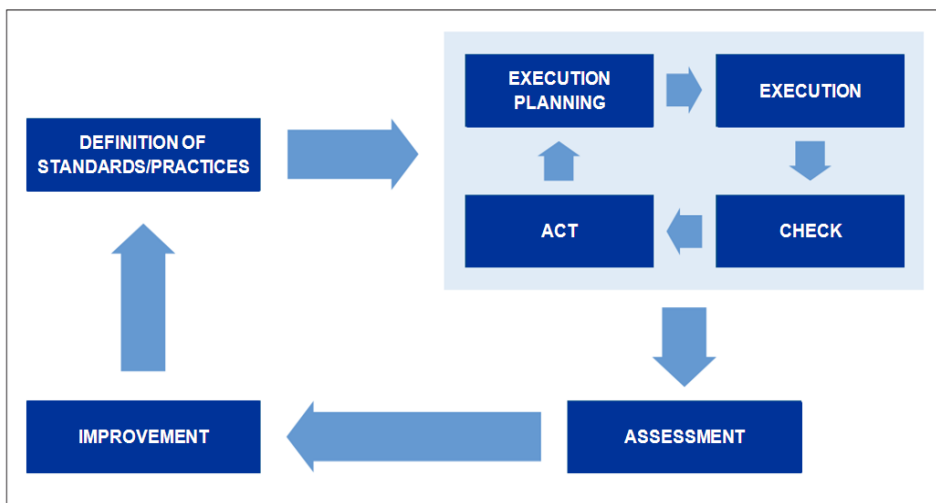
Systemic Framework - Performance Evolution



BRAZILIAN COMPANIES - REVENUE EVOLUTION (%)

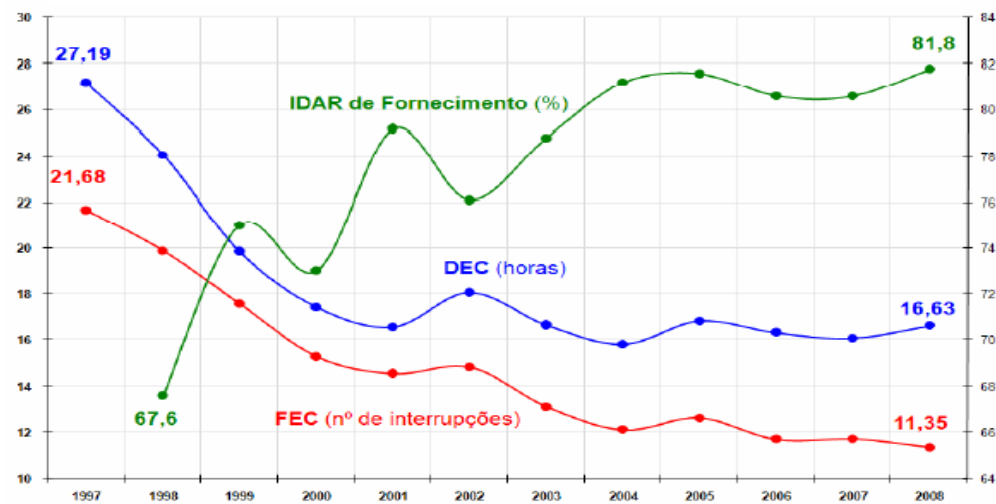


MANAGEMENT DIAGRAM - MEG®



BRAZILIAN HYDROELECTRICAL ENERGY - SECTOR PERFORMANCE

IDAR - Customer Satisfaction / DEC - Interruption Duration / FEC - Interruption Frequency



Pictures / Illustrations

- Selection and use of the ISO 9000 family of standards (in www.iso.org)
- Criteria for Performance Excellence / The Malcolm Baldrige National Quality Award (in www.baldrige.nist.gov)
- Bonini, S.M.J., Lenny T. Mendonca, L.T. and Jeremy M. Oppenheim, J.M. – *When social issues become strategic*, McKinsey Quarterly, May 2006 (in www.mckinseyquarterly.com)
- Mandelbrot, B. – *The Fractal Geometry of Nature*, San Francisco, W. Freeman, 1982
- Gleick, J. – *Chaos – Making a New Science*, 1987
- Criteria for Performance Excellence / Brazilian National Quality Award (in www.fnq.org.br)
- ABRADÉE - Brazilian Association of Electrical Energy Distributors (in www.abradee.com.br)