

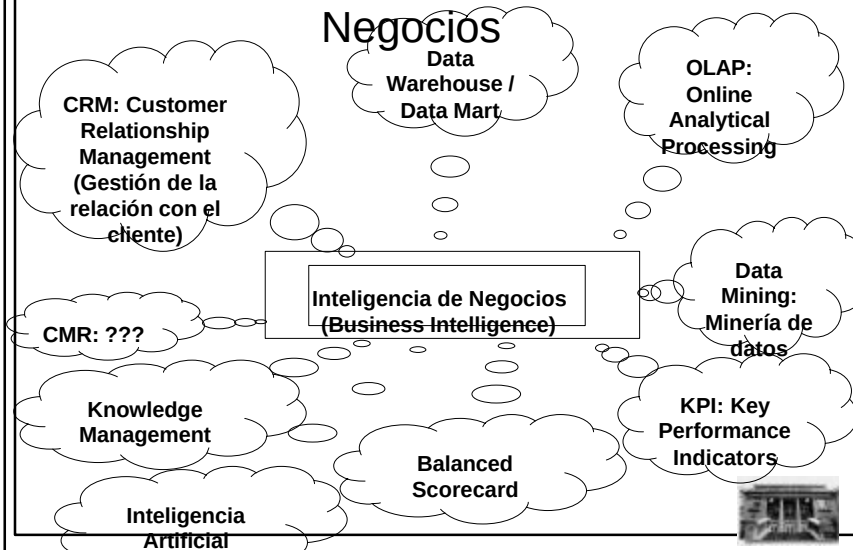
Introducción, Motivación

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El Vértigo de la Inteligencia de Negocios



KPI: Key Performance Indicators – Definición

KPIs, or **key performance indicators** help organizations achieve organizational goals through the definition and measurement of progress. The key indicators are agreed upon by an organization and are indicators which can be measured that will reflect success factors. The KPIs selected must reflect the organization's goals, they must be key to its success, and they must be measurable. Key performance indicators usually are long-term considerations for an organization.

<http://www.webopedia.com/TERM/K/KPI.html>



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Balanced Scorecard – Definición

Balanced Scorecard

The balanced scorecard is a strategic management system used to drive performance and accountability throughout the organization. The scorecard balances traditional performance measures with more forward-looking indicators in four key dimensions:

- » Financial
- » Integration/Operational Excellence
- » Employees
- » Customers

The Balanced Scorecard is an organizational framework for implementing and managing strategy at all levels of an enterprise by linking objectives, initiatives, and measures to an organization's strategy. The scorecard provides an enterprise view of an organization's overall performance. It integrates financial measures with other key performance indicators around customer perspectives, internal business processes, and organizational growth, learning, and innovation.

<http://www.leanadvisors.com/Lean/glossary/definition.cfm/Word/Balanced%20Scorecard.cfm>



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Inteligencia Artificial – Definición

Artificial Intelligence

The branch of computer science concerned with making computers behave like humans. The term was coined in 1956 by John McCarthy at the Massachusetts Institute of Technology. Artificial intelligence includes:

Games playing: programming computers to play games such as chess and checkers

Expert systems: programming computers to make decisions in real-life situations (for example, some expert systems help doctors diagnose diseases based on symptoms)

Natural language: programming computers to understand natural human languages

Neural networks: Systems that simulate intelligence by attempting to reproduce the types of physical connections that occur in animal brains

Robotics: programming computers to see and *hear* and react to other sensory stimuli

http://www.webopedia.com/TERM/a/artificial_intelligence.html



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Knowledge Management – Definición

Knowledge Management is the explicit and systematic management of vital knowledge - and its associated processes of creation, organization, diffusion, use and exploitation.

Explicit - Surfacing assumptions; codifying that which is known

Systematic - Leaving things to serendipity will not achieve the benefits

Vital Knowledge - You need to focus; you don't have unlimited resources

Processes - Knowledge management is a set of activities with its own tools and techniques

<http://www.skyrme.com/resource/kmbasics.htm>



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CRM – Definición

CRM

Short for *customer relationship management*. CRM entails all aspects of interaction a company has with its customer, whether it be sales or service related. Computerization has changed the way companies are approaching their CRM strategies because it has also changed consumer buying behavior. With each new advance in technology, especially the proliferation of self-service channels like The Web and WAP phones, more of the relationship is being managed electronically. Organizations are therefore looking for ways to personalize online experiences (a process also referred to as mass customization) through tools such as Help-desk software, e-mail organizers and Web development apps.

<http://www.webopedia.com/TERM/C/CRM.html>



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Business Intelligence – Definición

Business Intelligence

The term Business Intelligence (BI) represents the tools and systems that play a key role in the strategic planning process of the corporation. These systems allow a company to gather, store, access and analyze corporate data to aid in decision-making.

Generally these systems will illustrate business intelligence in the areas of customer profiling, customer support, market research, market segmentation, product profitability, statistical analysis, and inventory and distribution analysis to name a few.

http://www.webopedia.com/TERM/B/Business_Intelligence.html



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Generación de datos

- **The World Wide Web** contains about 170 terabytes of information on its surface; in volume this is seventeen times the size of the Library of Congress print collections.

- **Instant messaging** generates five billion messages a day (750GB), or 274 Terabytes a year.

- **Email** generates about 400,000 terabytes of new information each year worldwide.

Fuente: <http://www.sims.berkeley.edu/research/projects/how-much-info-2003/>

Código Barra

RFID: Radio Frequency Identification

... ..



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Data Warehouse – Definición

Data Warehouse:

Abbreviated *DW*, a collection of data designed to support management decision making.

Data warehouses contain a wide variety of data that present a coherent picture of business conditions at a single point in time.

Development of a data warehouse includes development of systems to extract data from operating systems plus installation of a warehouse database systems that provides managers flexible access to the data.

The term data warehousing generally refers to the combination of many different databases across an entire enterprise. Contrast with data mart.

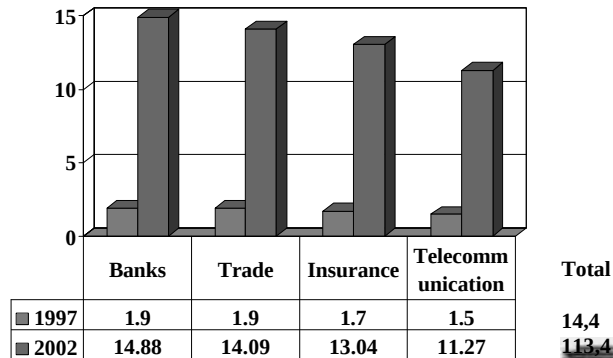
Fuente:

http://www.webopedia.com/TERM/D/data_warehouse.html



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Desarrollo del Mercado de Data Warehouses



Fuente: Palo Alto Management Group
(números en mil millones de US-\$)

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Motivaciones para Almacenar Datos

Razones iniciales:

En telecomunicación:

Facturación de llamadas

En supermercados:

Gestión del inventario

En bancos:

Manejo de cuentas

En empresas de producción:

Control de procesos

Potenciales:

En telecomunicación:

Detección de fraude

En supermercados:

Asociación de ventas

En bancos:

Segmentación de clientes

En empresas de producción:

Mantenimiento preventivo

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Idea básica y potenciales de data mining

• Empresas y Organizaciones tienen gran cantidad de datos almacenados.

• Los datos disponibles contienen información importante.

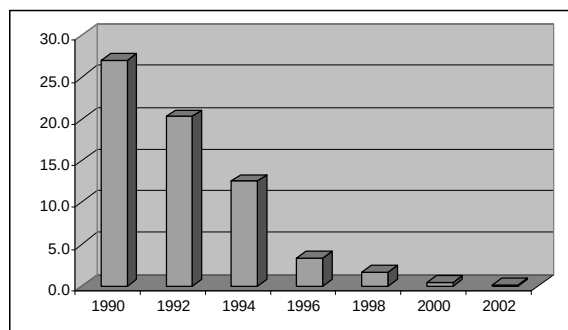
• La información está escondida en los datos.

• **Data mining** puede encontrar información nueva y potencialmente útil en los datos



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Costos para guardar datos



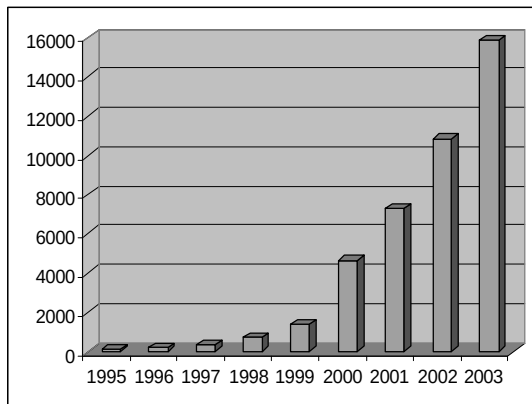
Costos de un disco duro (US-\$) / Capacidad (MB)

Fuente: <http://www.sims.berkeley.edu/research/projects/how-much-info-2003/>



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Disponibilidad de datos



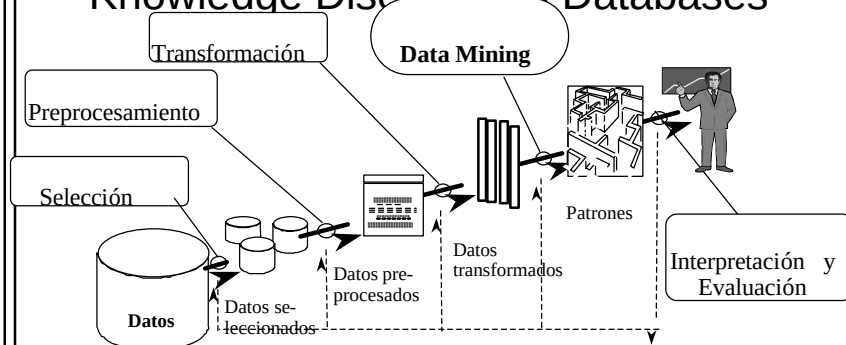
Capacidad de nuevos discos duros (PB)

Fuente: <http://www.sims.berkeley.edu/research/projects/how-much-info-2003/>



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Proceso de KDD Knowledge Discovery in Databases



“KDD es el proceso no-trivial de identificar patrones previamente desconocidos, válidos, nuevos, potencialmente útiles y comprensibles dentro de los datos”



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Potenciales de Data Mining - 1



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Potenciales de Data Mining - 2



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Aplicaciones de Data Mining

• Customer Relationship Management

- Segmentación de clientes

- Database Marketing

- Predicción de compra

- Retención de clientes

- Predicción de fuga

• Detección de Fraude

- Tarjetas de crédito

- Uso de teléfonos (celulares)

• Predicción de series de tiempo



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Detección de Fraude - ejemplos

- CTC Telefónica Chile

- ISAPRES

- Pago de Impuestos

- Importaciones en Aduanas (Caso de
Aduanas del Perú)



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Magic Quadrant for Business Intelligence Platforms, 2008



Fuente: Gartner 2008

As of January 2008



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Más información

• www.kdnuggets.com

• www.businessintelligence.com

• http://www.dmreview.com/channels/business_intelligence.html



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