Data scalability. Why you should care?

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Presentation survey

Presentation plan

1) About GridwiseTech
2) Building efficient database oriented, IT systems
3) Momentum + case study

Presentation duration

40 minutes

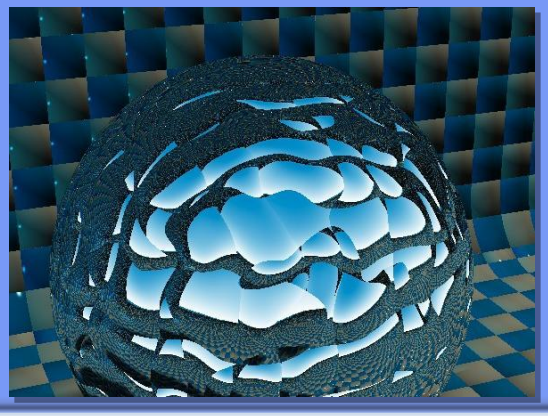
About GridwiseTech

***Mission**: turn avant-garde technology into customer's business benefits*

Leading vendor-independent scalable technology expert.

Solve scalability and performance problems with virtualization, Grid, distributed data processing, caching.

Implement vision for distributed infrastructures.



Our references

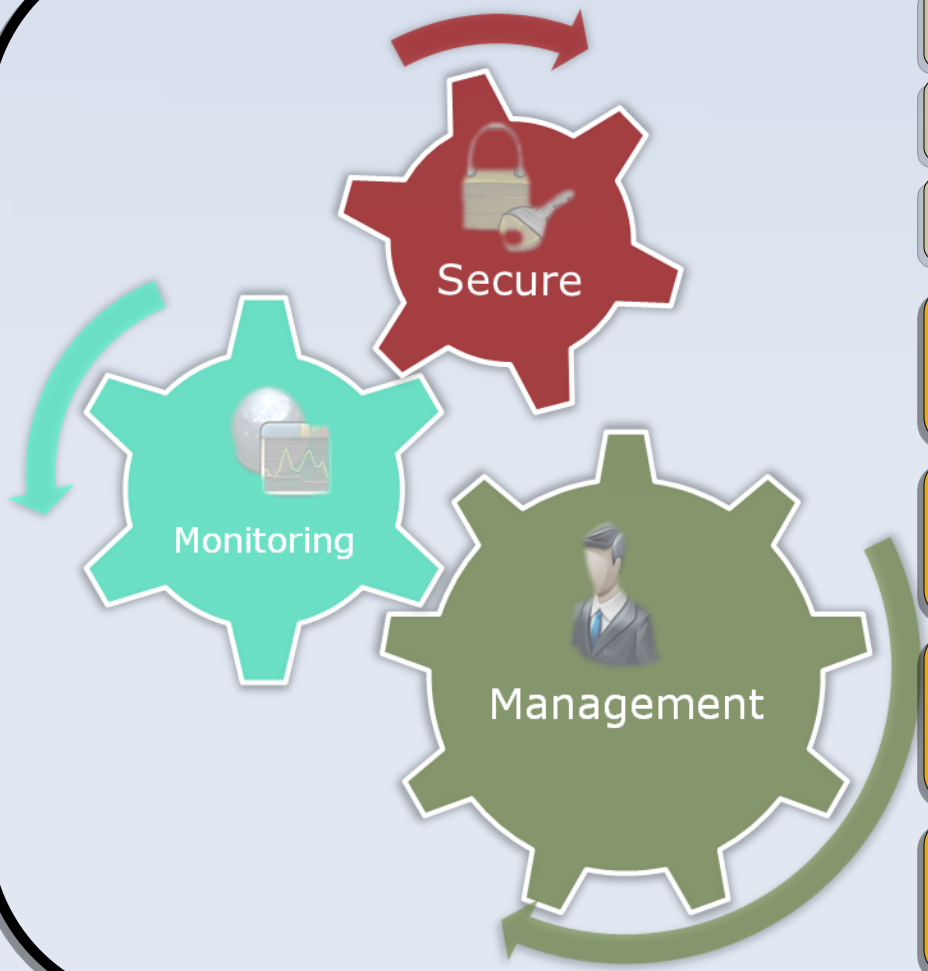
Chosen customers

Chosen partners

Building efficient IT system

- Application
- WWW
- SOA
- Middleware
- Processing
- Data provisioning
- Data persistence

Vendors puzzle



Application

WWW

SOA

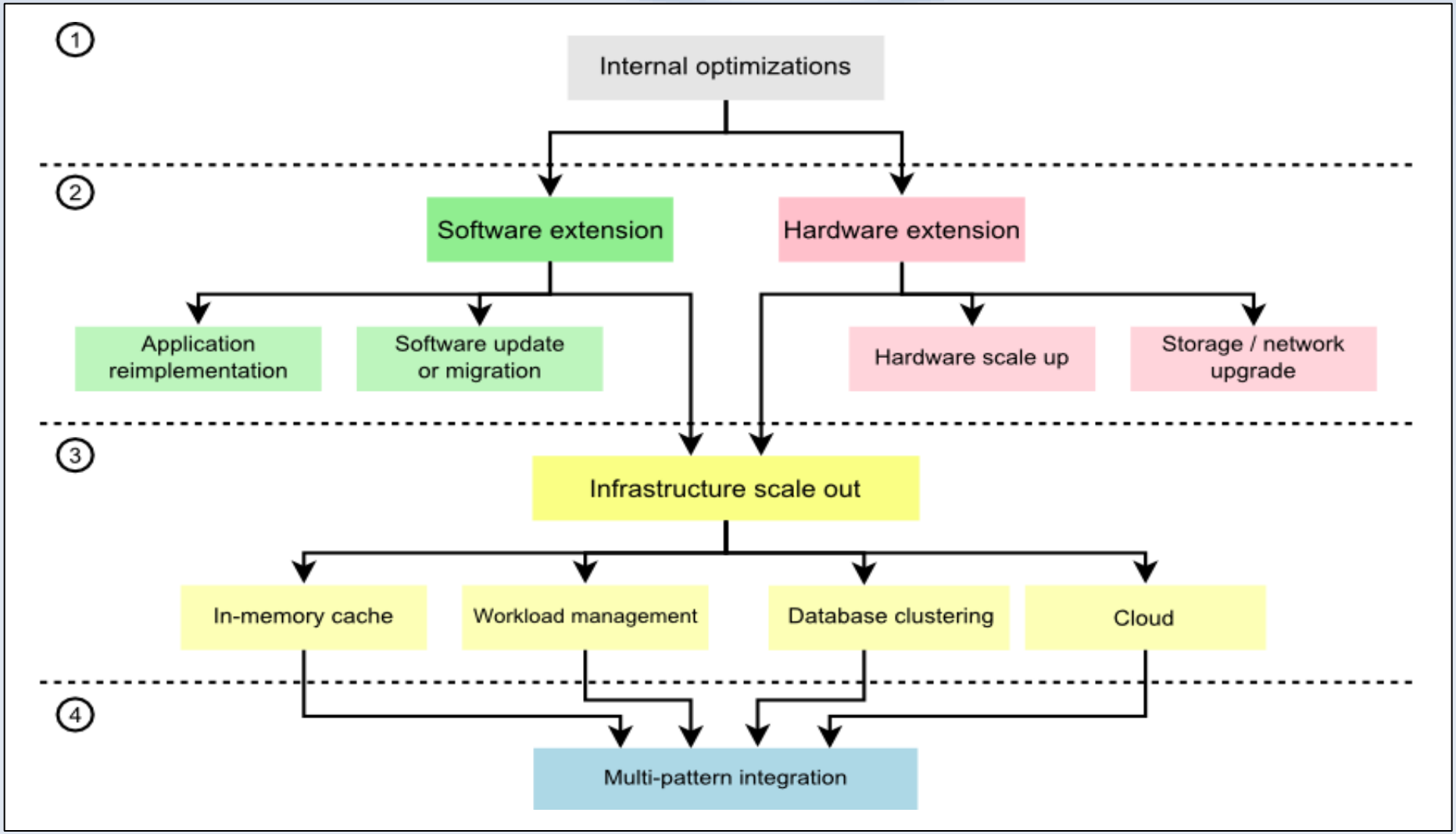
Citrix, Vmvare,Novell, Virtual Iron, RedHat

Platform Computing, Sun Microsystems, Altair, UnivaUD, Cluster Resources

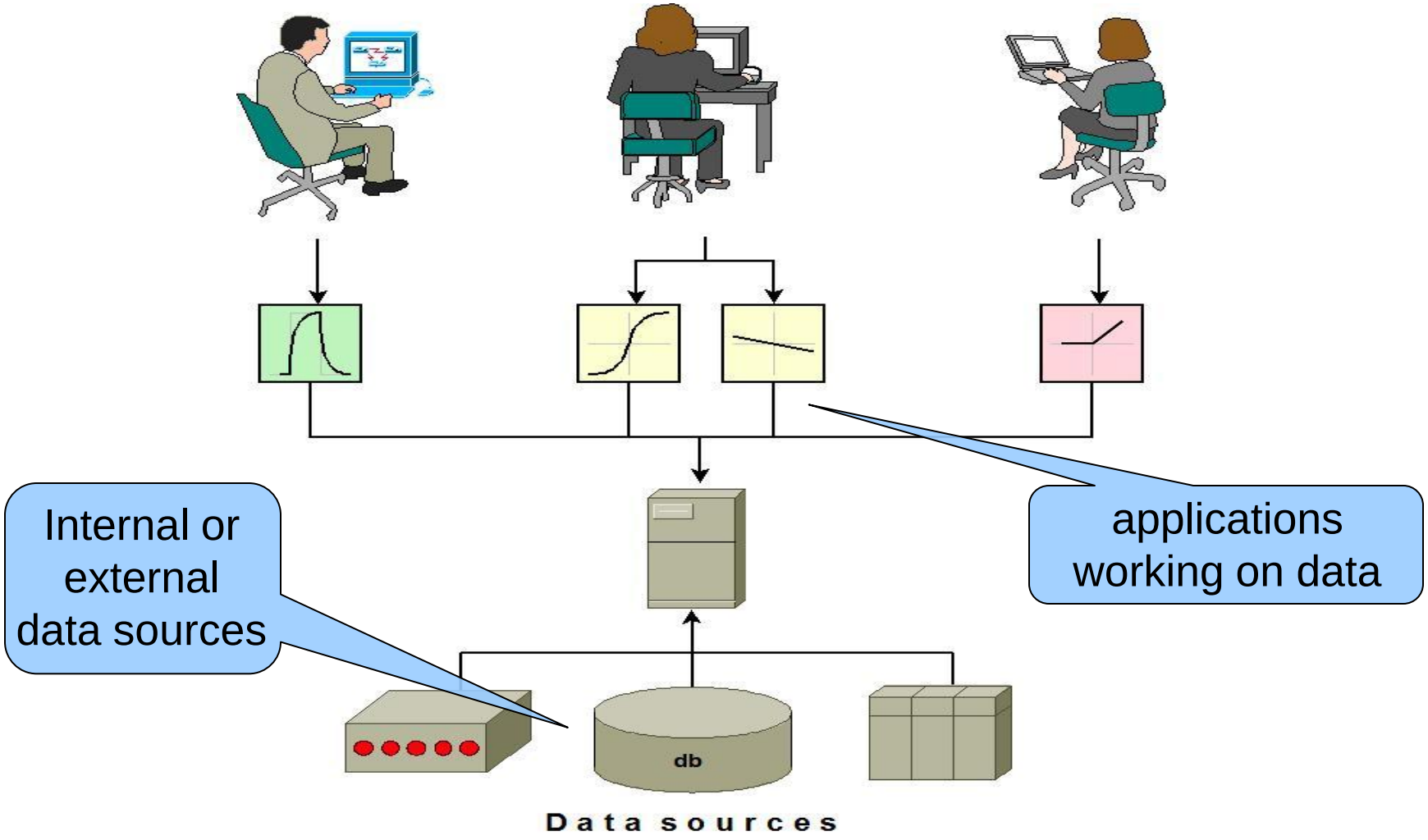
Gigaspaces, Gemstone, Coherence, eXludus, Terracotta

Oracle, IBM, Microsoft PostreSQL, MySQL

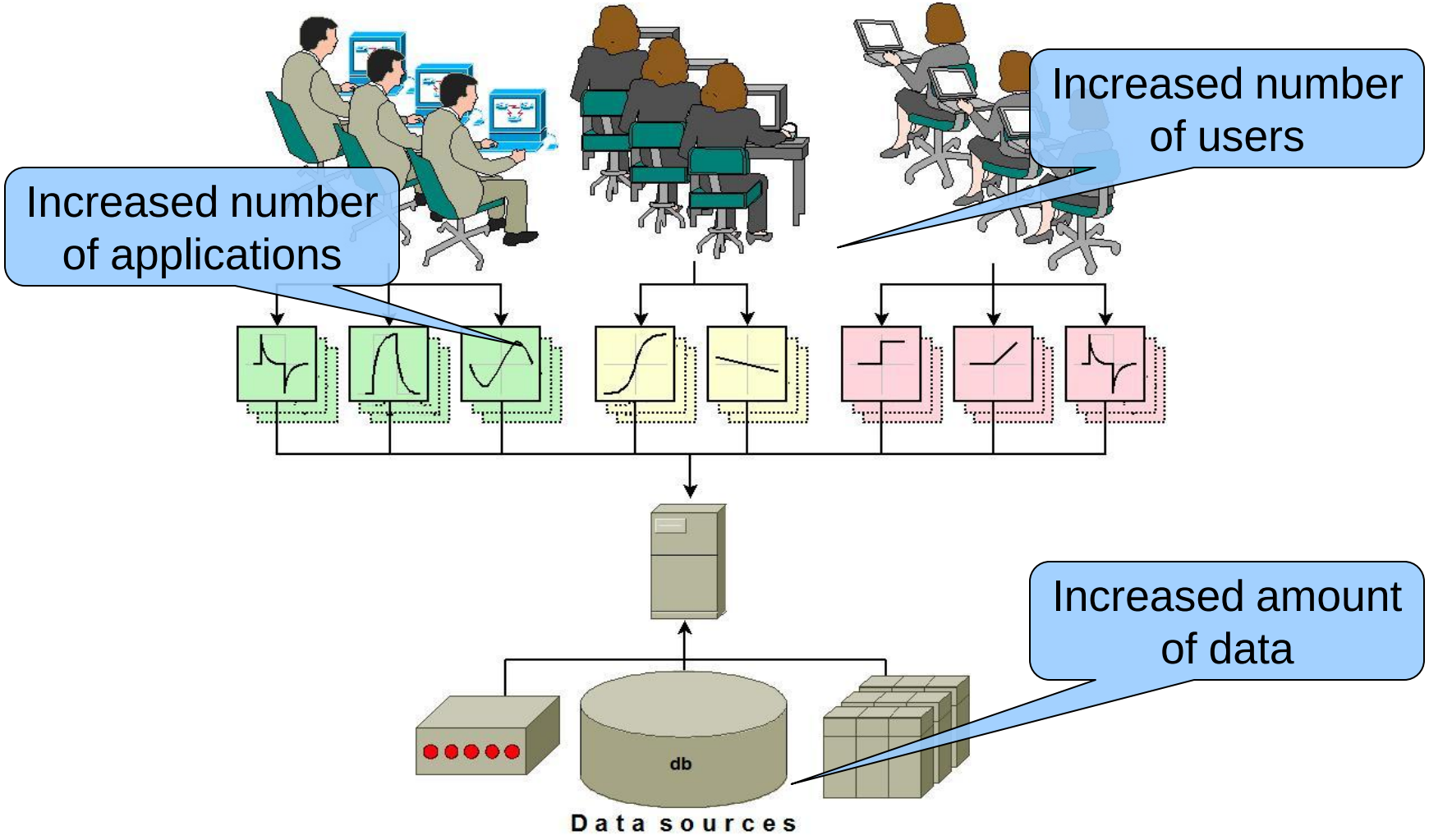
Improving the system efficiency



Simple data oriented IT system



IT systems are constantly growing



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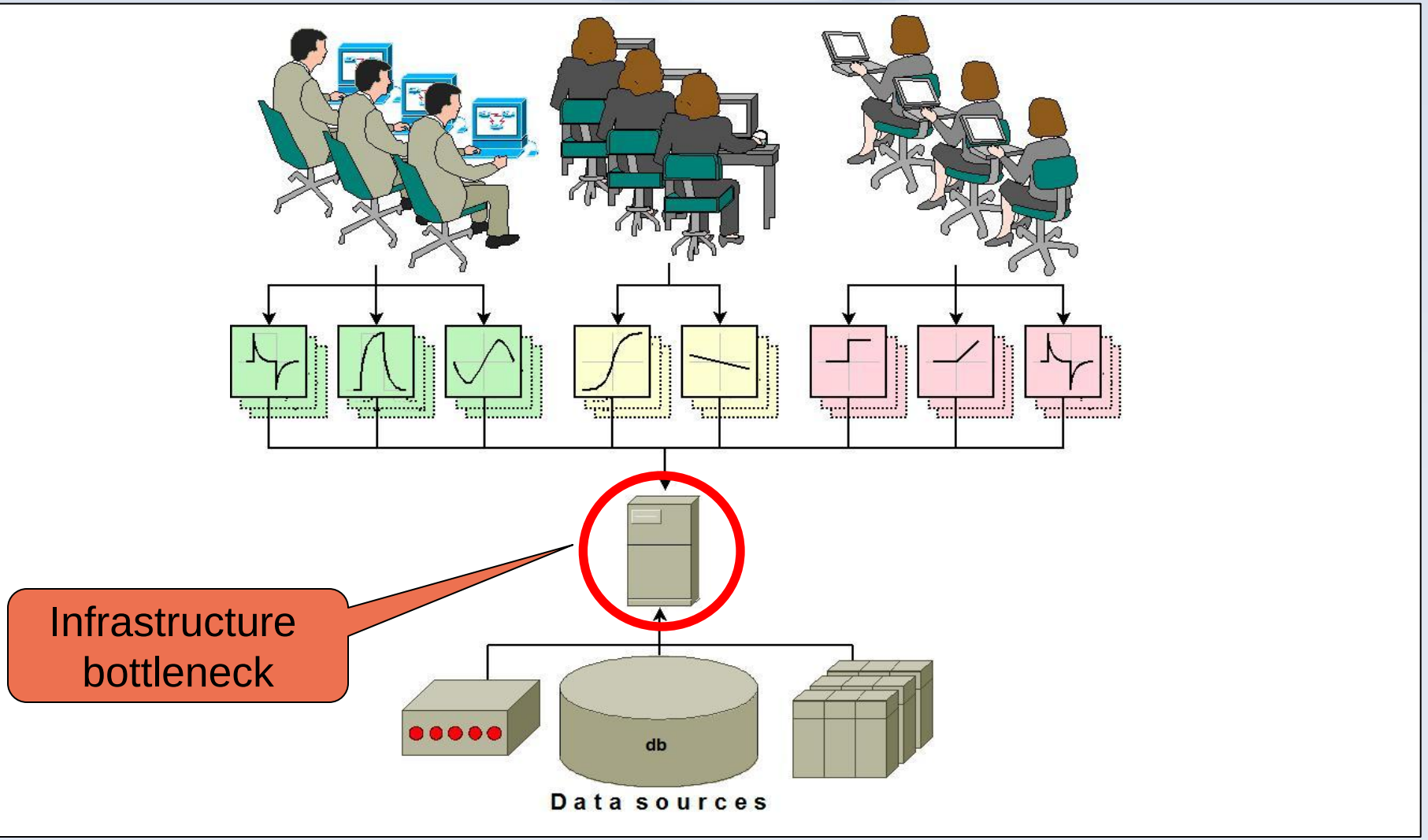
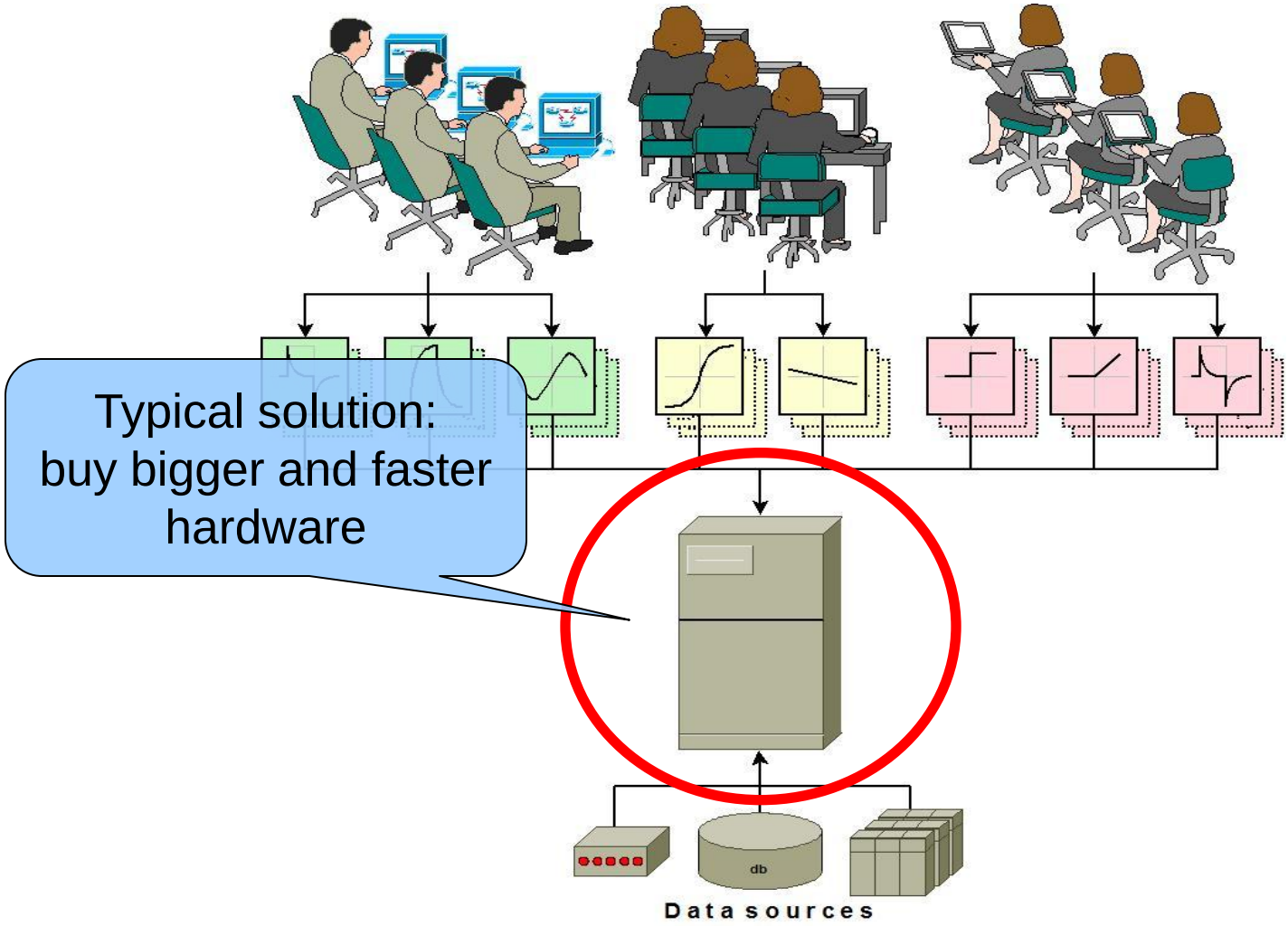


Hardware scale up – the first idea



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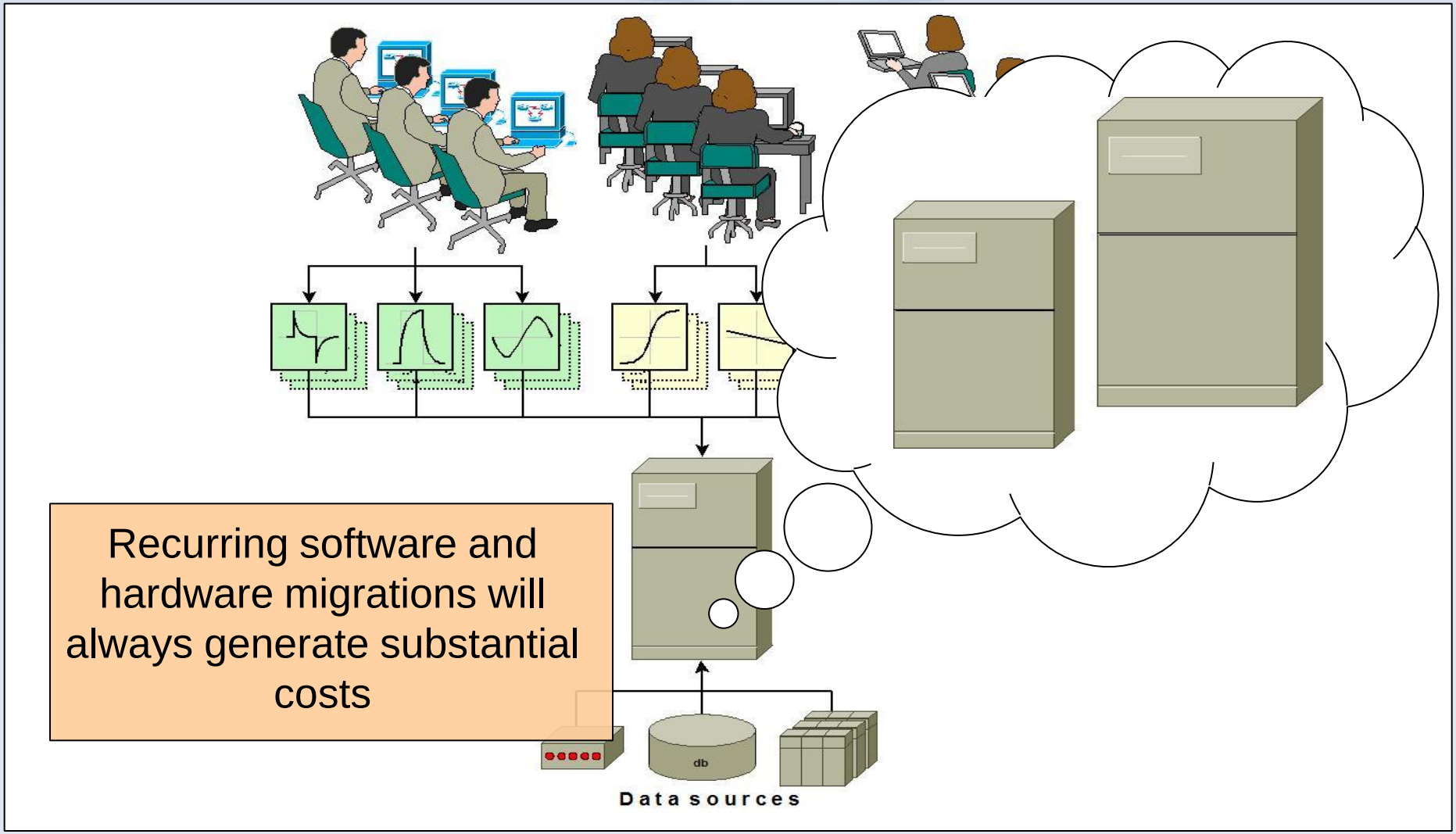
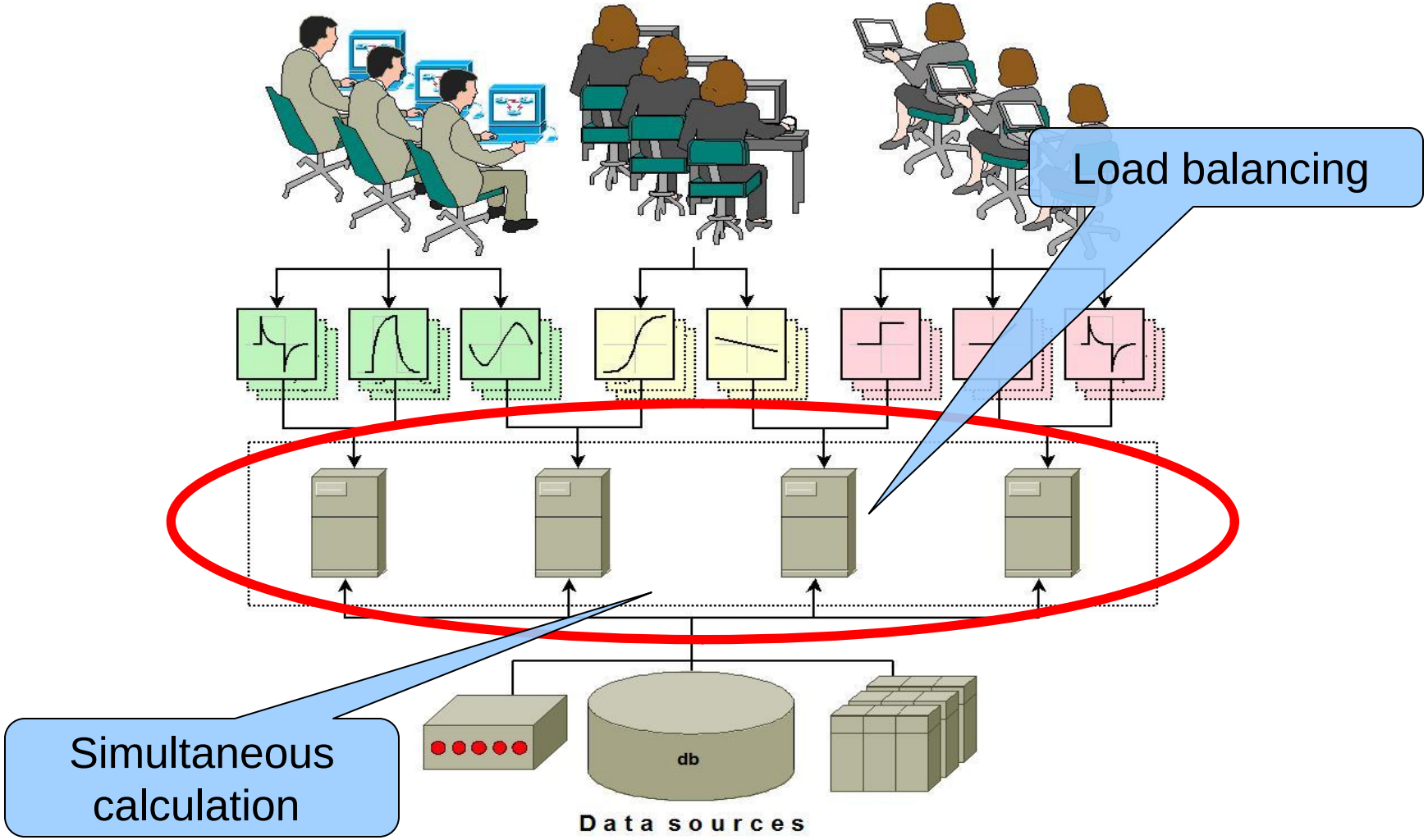
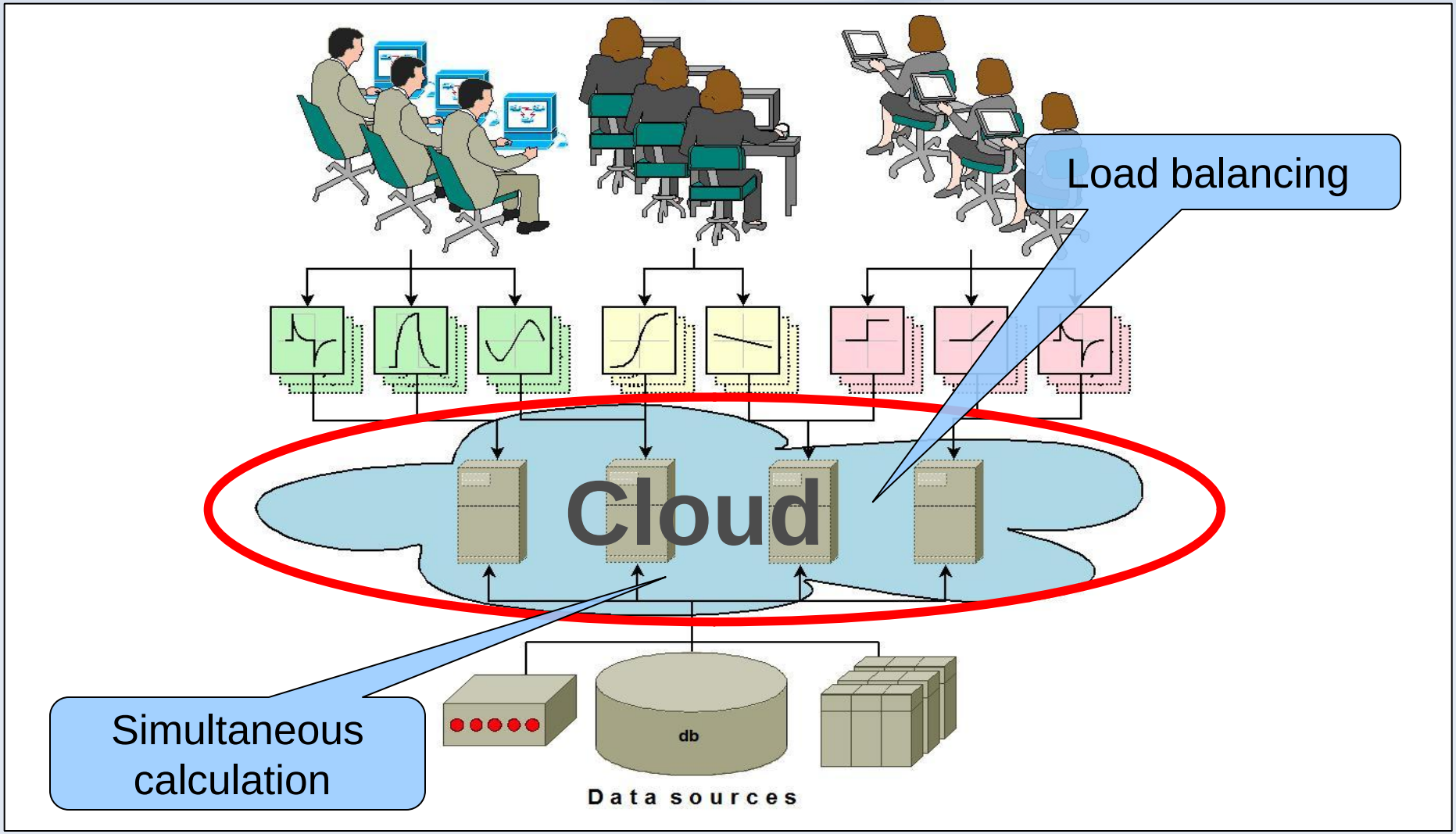


Recurring software and hardware migrations will always generate substantial costs

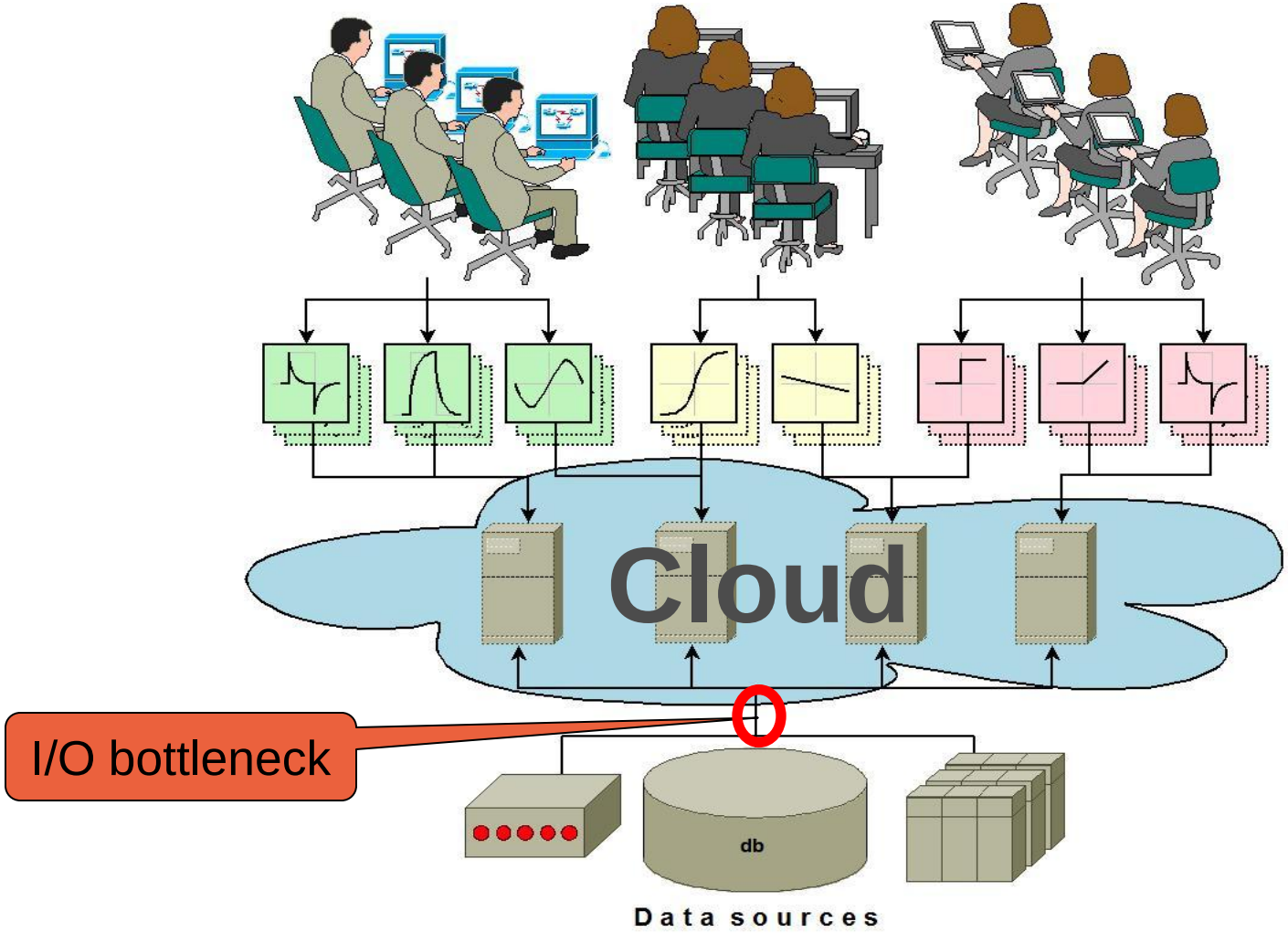
Introduction of scalability



Introduction of scalability



Introduction of distributed processing

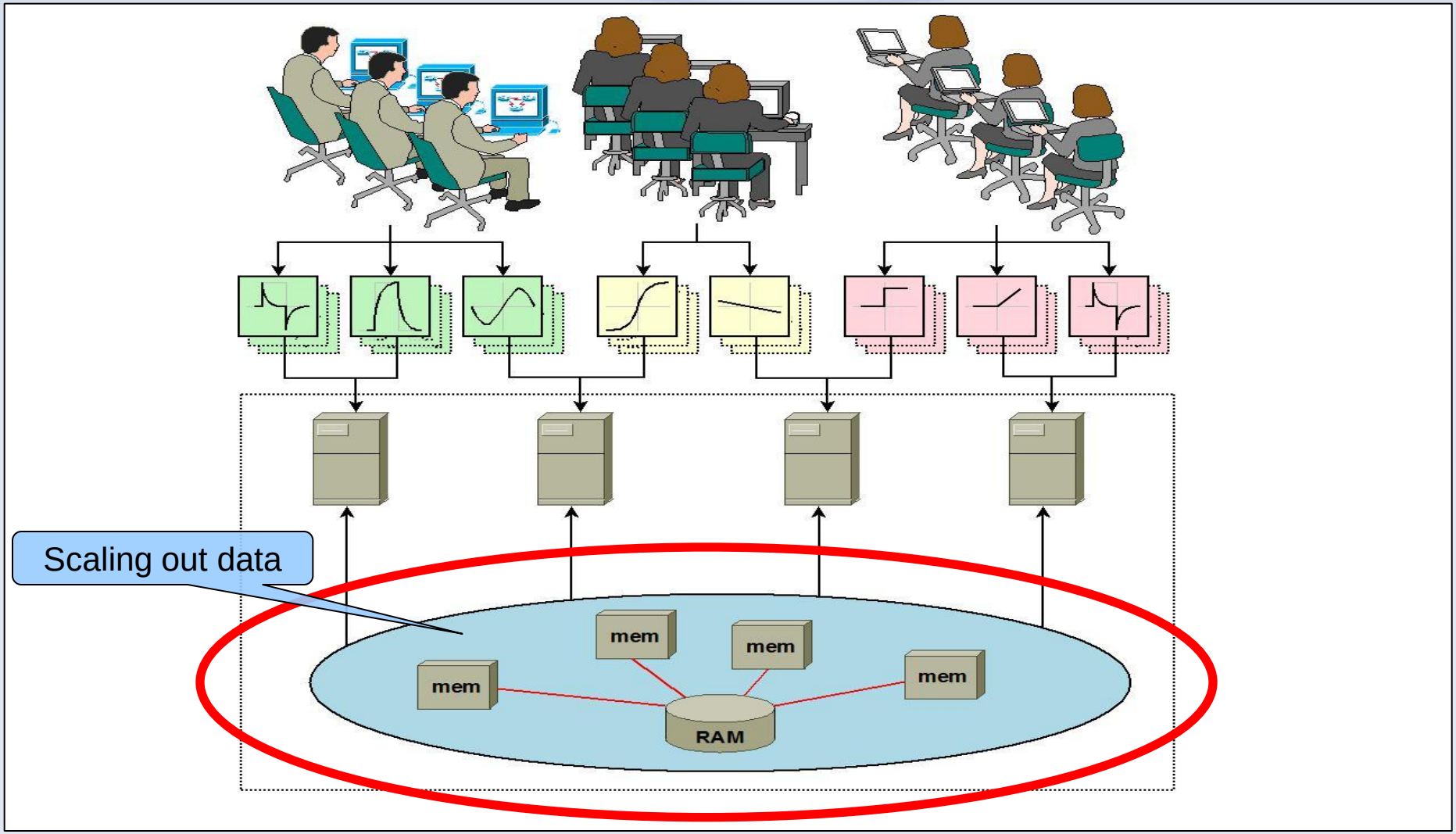


Problem with data access?

- Database / configuration / storage optimization

- In-memory databases
- Database clustering
- Sharding
- Data grids
- Distributed caching

Fully scalable system



Project for electronic manufacturer

Project main goal

Improve report generation time by **70%** allowing for increase in daily production.

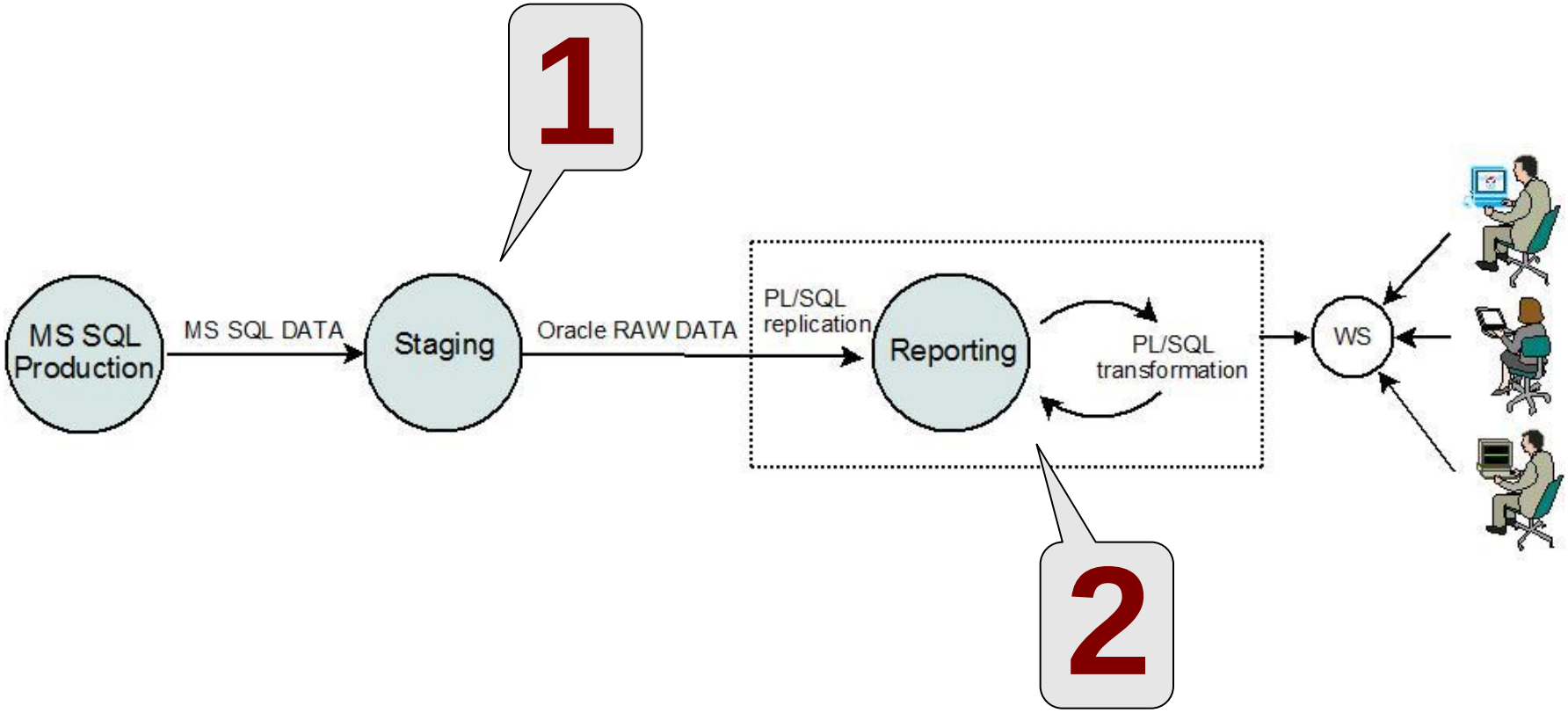
Business problem:

- lack of possibility to increase production
- limited process manageability due to report availability delay
- Repetitive infrastructure down time resulting in data inconstancy
- Data normalization problem due to many different data sources

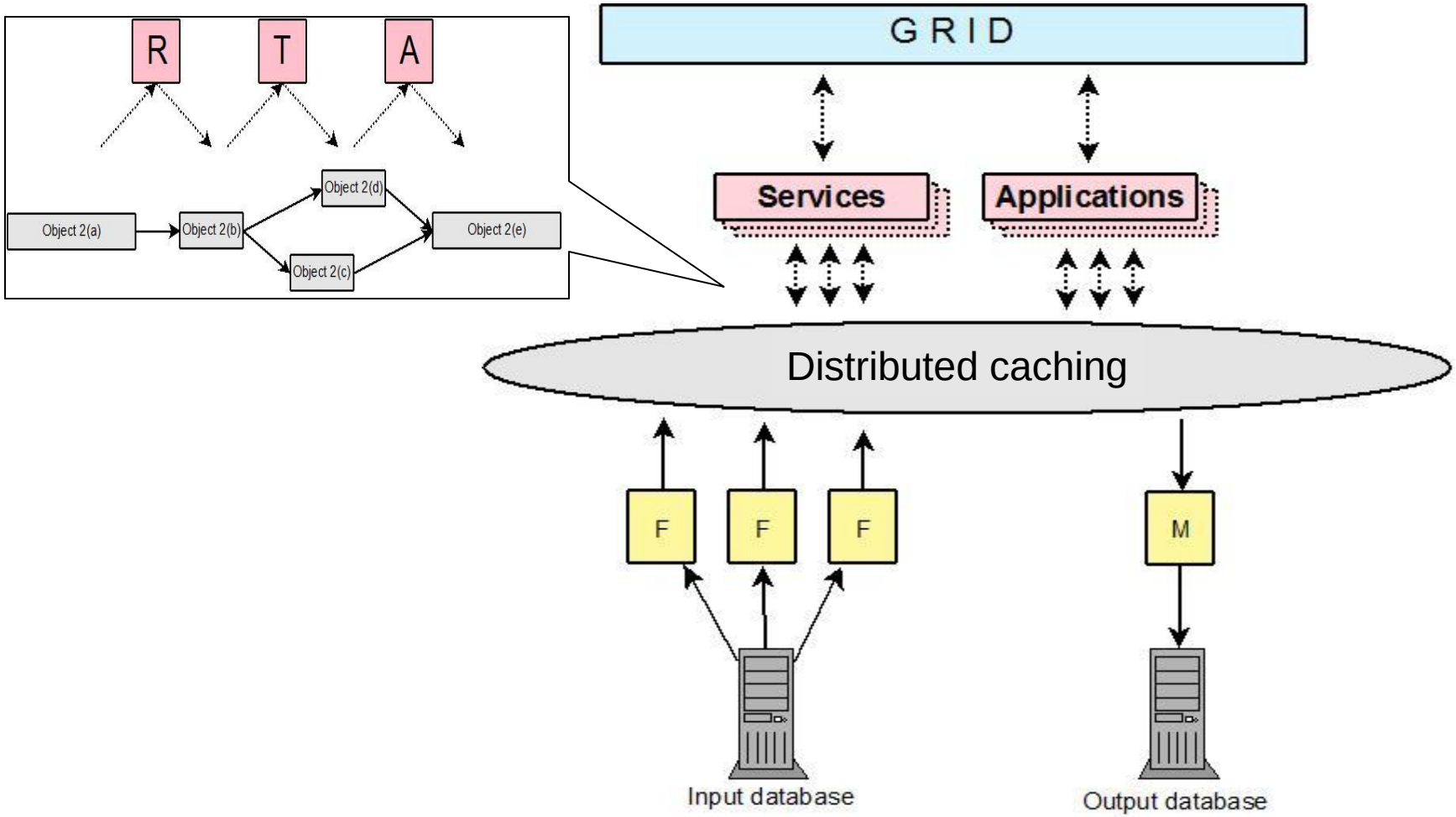
Technical scope of the problem:

- 2,5 million transactions per day
- many databases, different vendors and/or versions
- 4TB of data to maintain
- constant environment modifications
- 400,000 lines of PL/SQL code to analyze

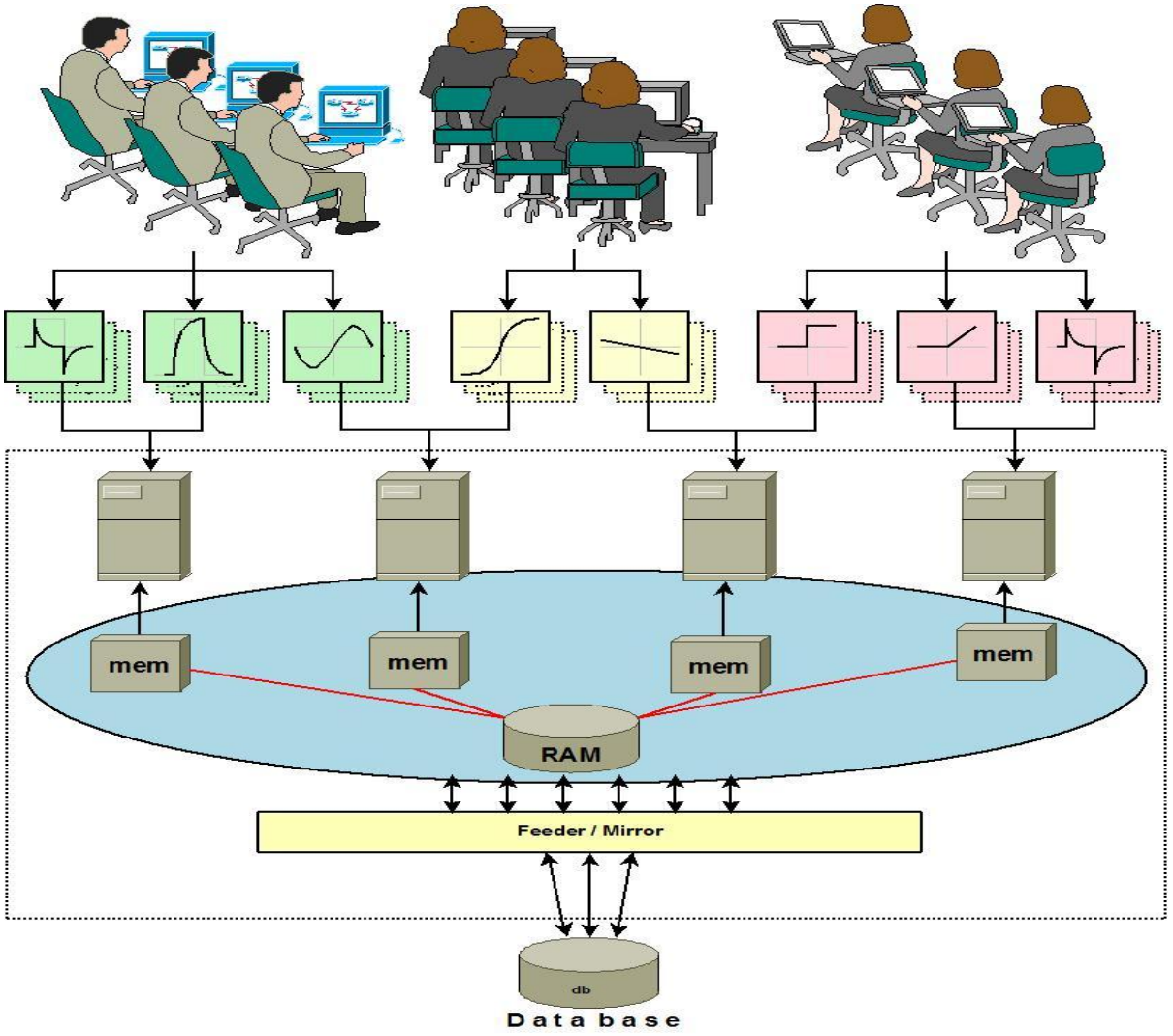
Initial customer architecture



Designed architecture



Momentum



Project for electronic manufacturer

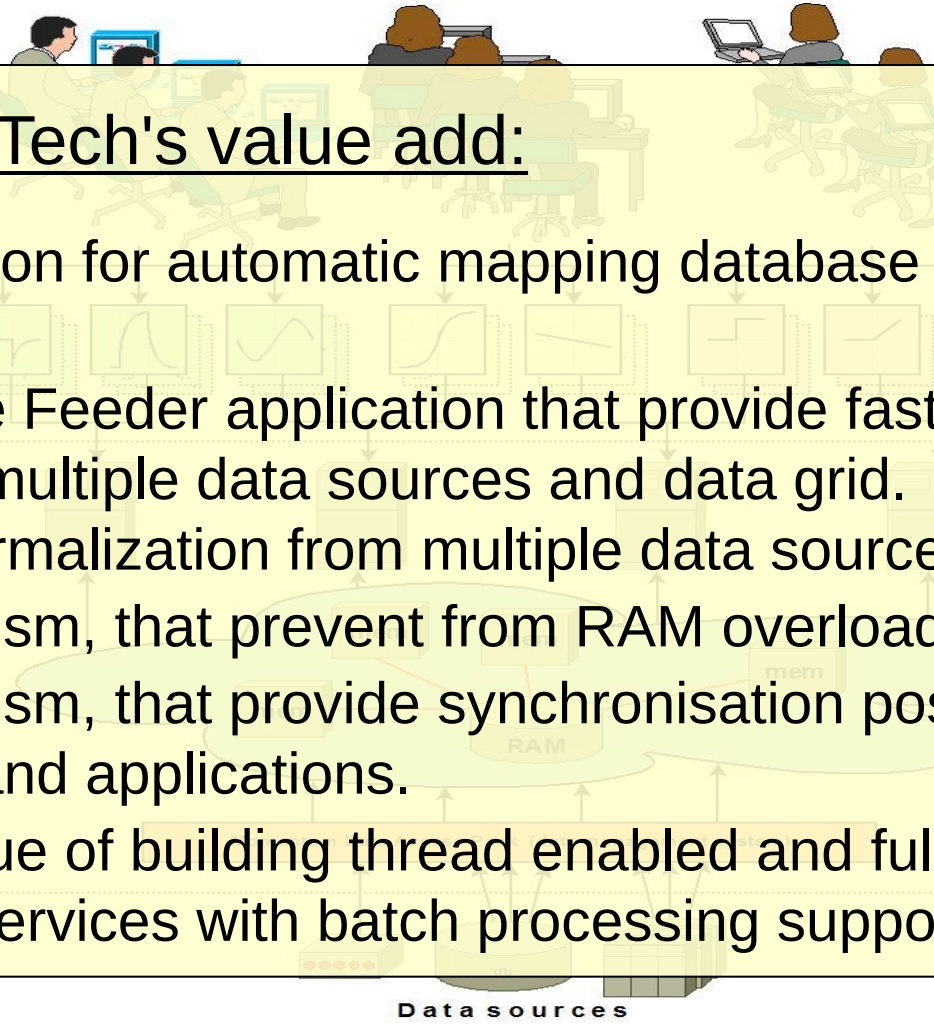
Project main goal

Improve report generation time by **70%** allowing for increase in daily production.

Results of scaling manufacturer infrastructure:

- Scalability ensured on each functional layer
- Real-time report generation
- 10x times data processing speed-up
- 100,000 of reads/writes per second (7500 before)
- Fully manageable production process

GridwiseTech's value add



GridwiseTech's value add:

- Application for automatic mapping database tables into objects.
- Scalable Feeder application that provide fast data replication between multiple data sources and data grid.
- Data normalization from multiple data sources.
- Mechanism, that prevent from RAM overloading.
- Mechanism, that provide synchronisation possibility between services and applications.
- Technique of building thread enabled and fully scalable external services with batch processing support.

Thank you

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