Microsoft .NET Platform

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Agenda

1 Problem

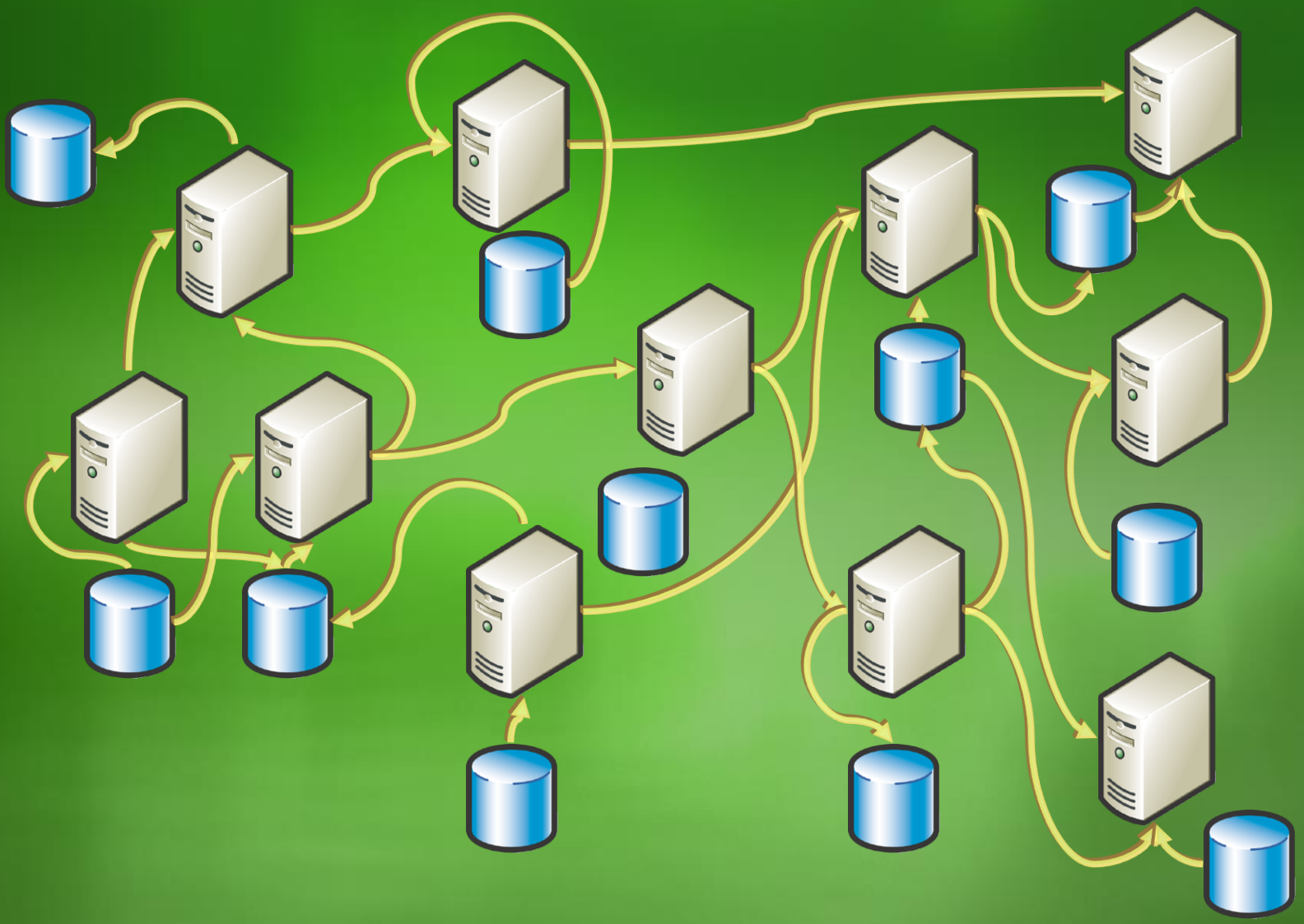
2 Tool: Web Services

3 Solution: Service-Oriented Architecture

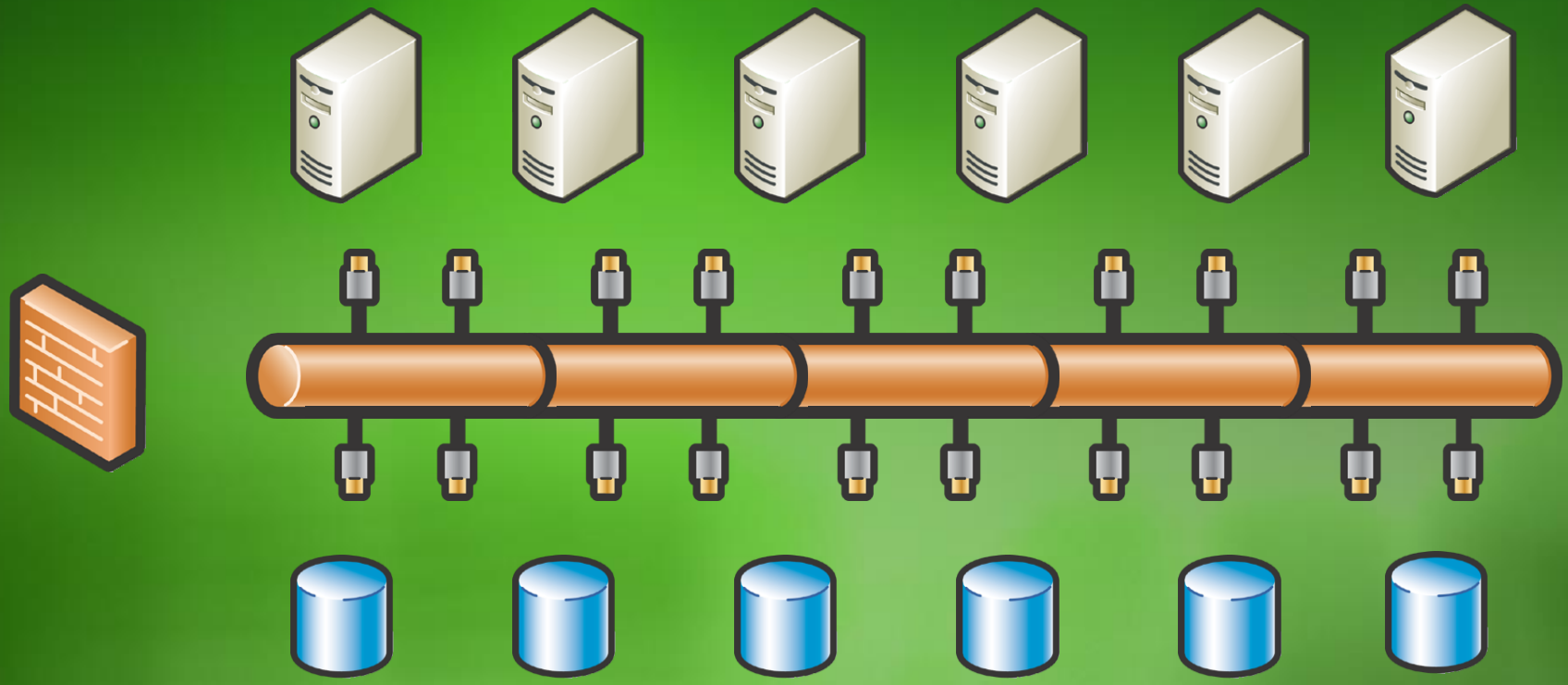
Why do we have IT?

- **Operate**
  - Control systems, machinery, production
  - Generate product or services that have economic value
- **Transact**
  - Exchange information, capital, goods and services with partners, customers, and suppliers
- **Record**
  - Store important information for use in business processes, such as financials
  - Keep track of processes across the enterprise
- **Collaborate**
  - Facilitate business processes between humans, across teams, companies and the world

Today

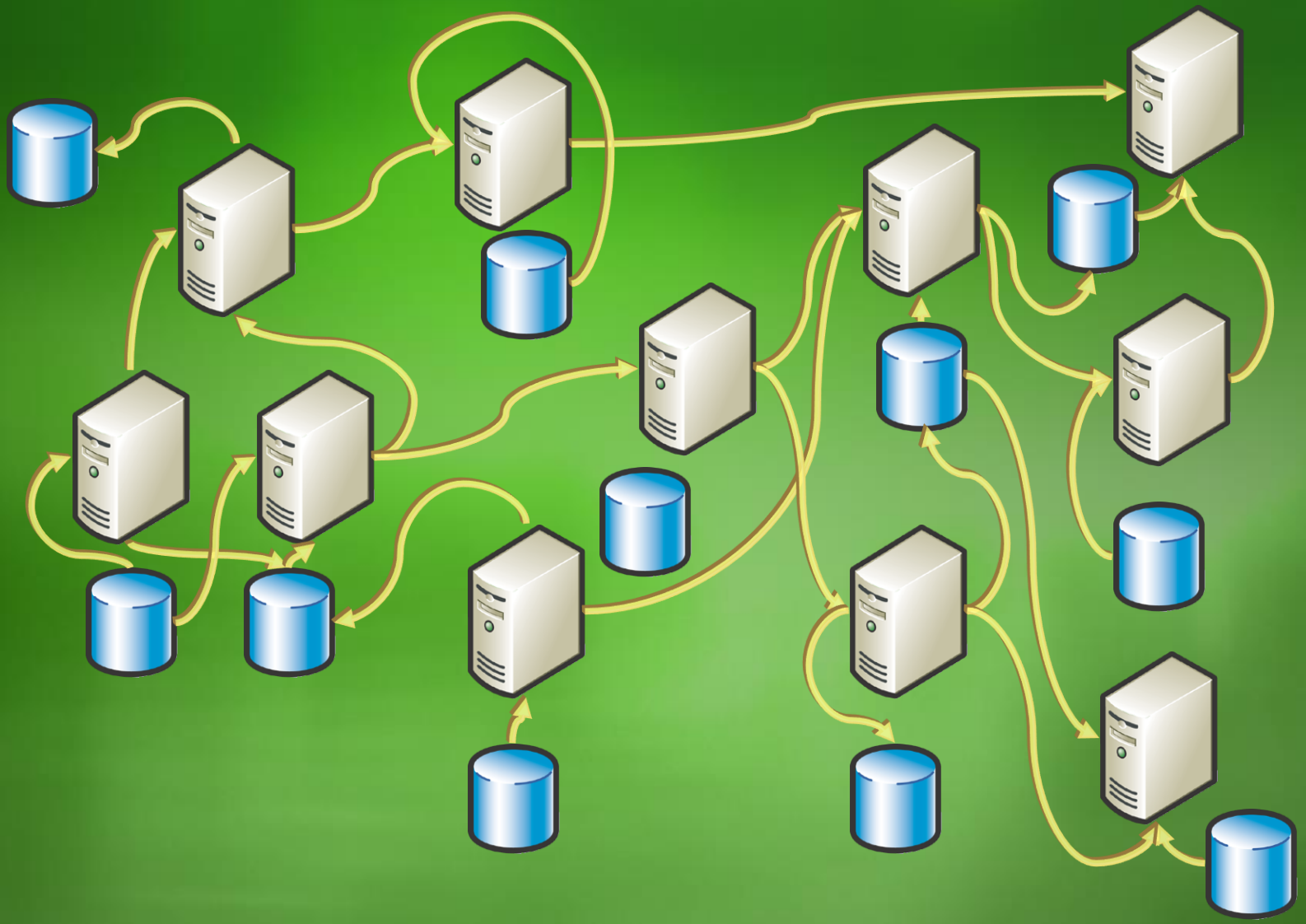


If You Invest ...Then Tomorrow

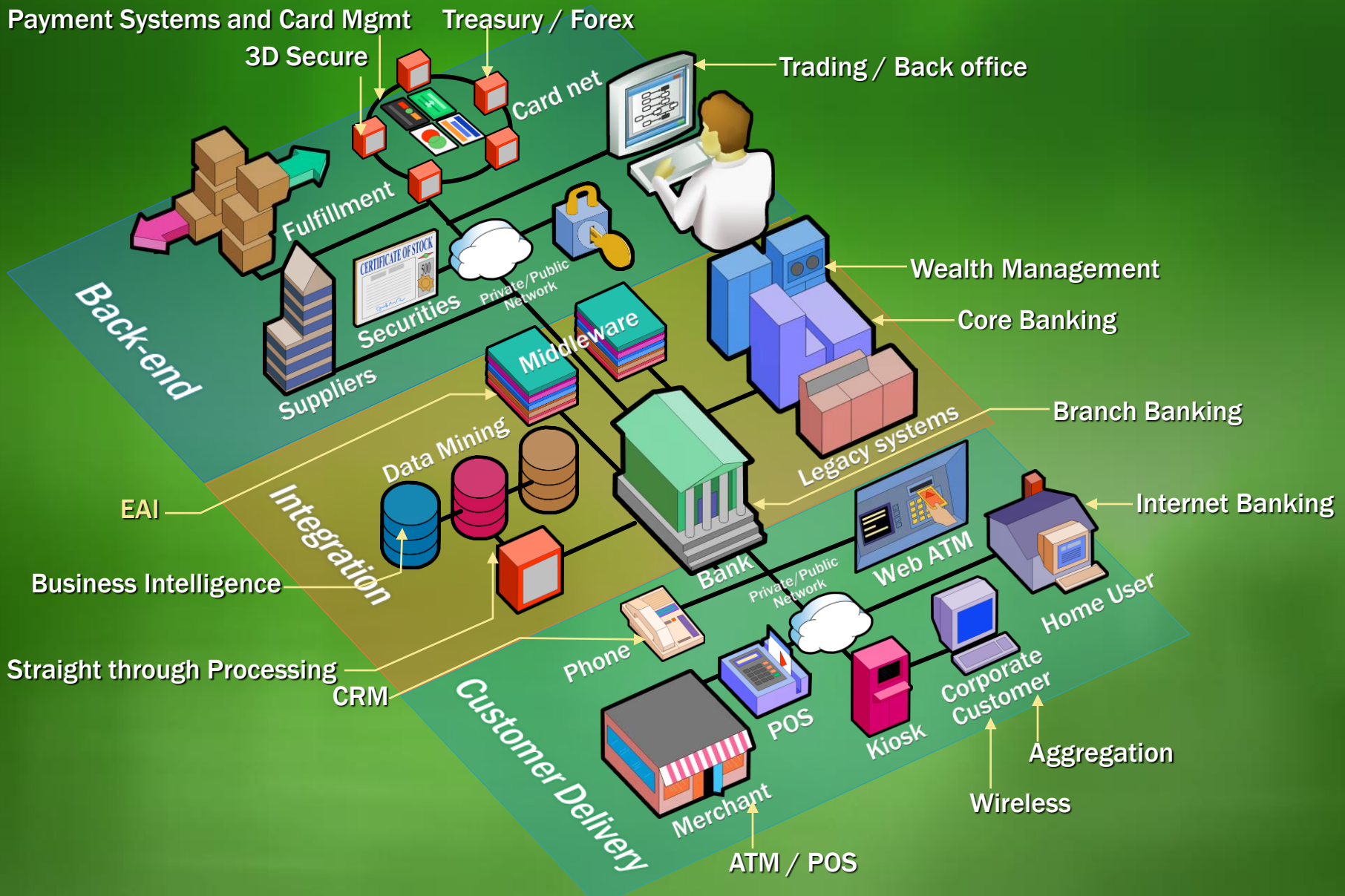


10 Years Later

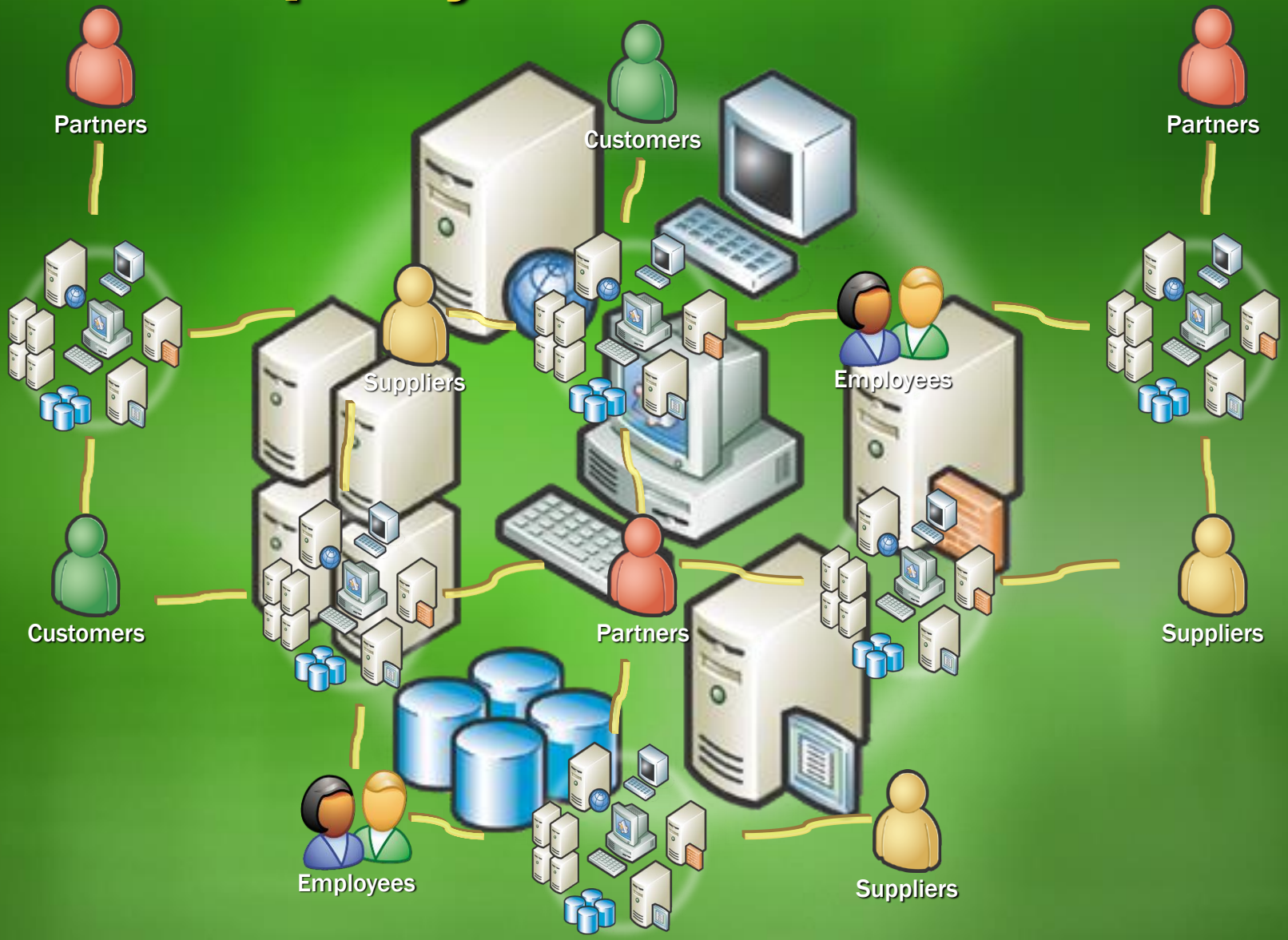
What Actually Happened



No Application Is An Island



No Company Is An Island



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What are XML Web Services?

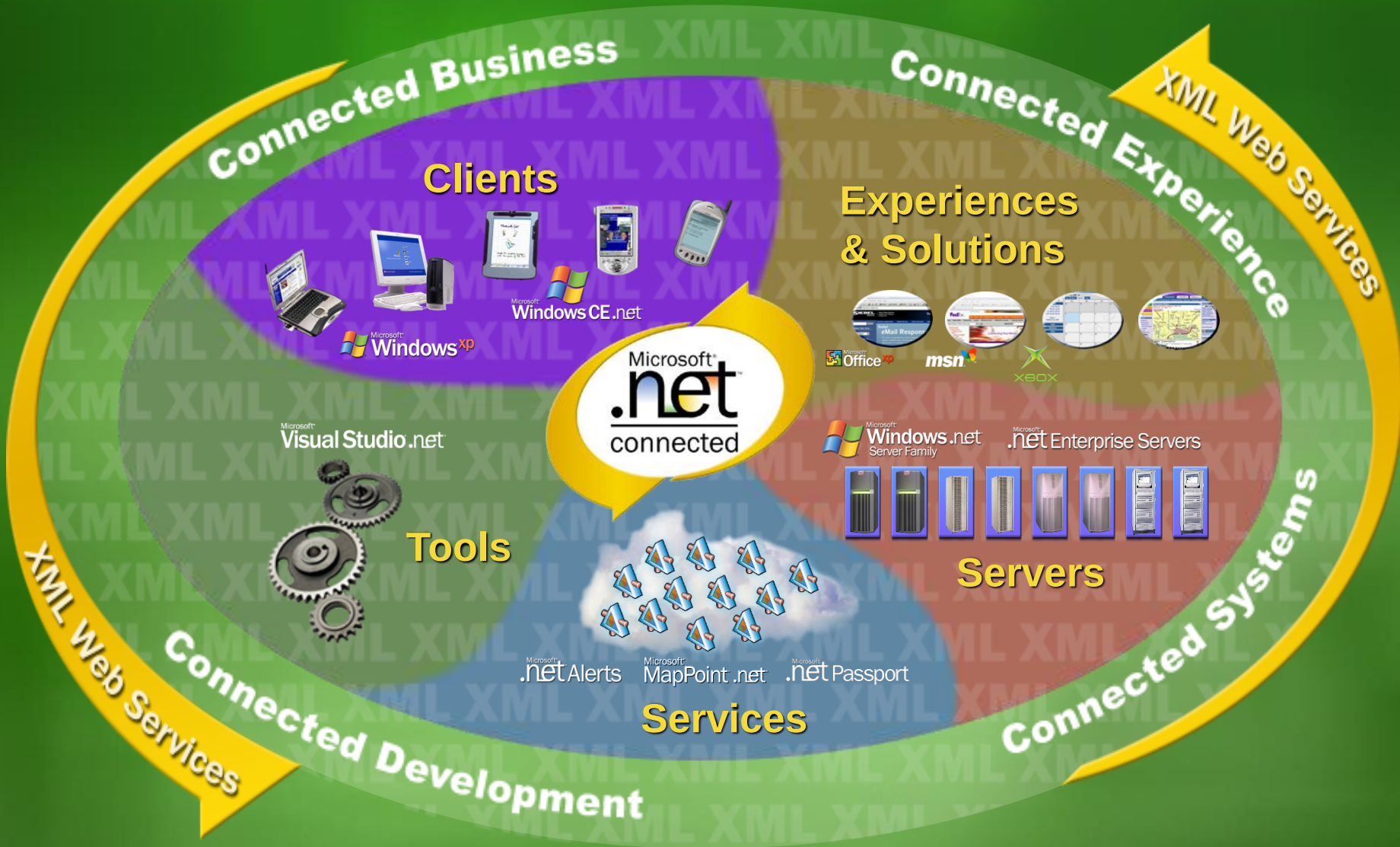
- Industry standards for applications to talk to each other
  - Extend basic web concepts… (HTTP, HTML)
  - To applications (SOAP, XML, WSDL, UDDI)
- Designed to work across platforms & languages
- Coexist well with firewalls and networks
- Standards body defining the specs:
  - Participation by all the major players

What is .NET?

- .NET is our brand for our XML and WS stacks
- Microsoft is delivering XML and Web Services capability across our product line
  - Windows OS, BizTalk, SharePoint, etc.
- New applications use the .NET framework, which includes WS and XML tools
- Use Visual Studio to develop applications on the .NET framework from a variety of languages
  - C#, C++, J#, VB.NET, (and many others)

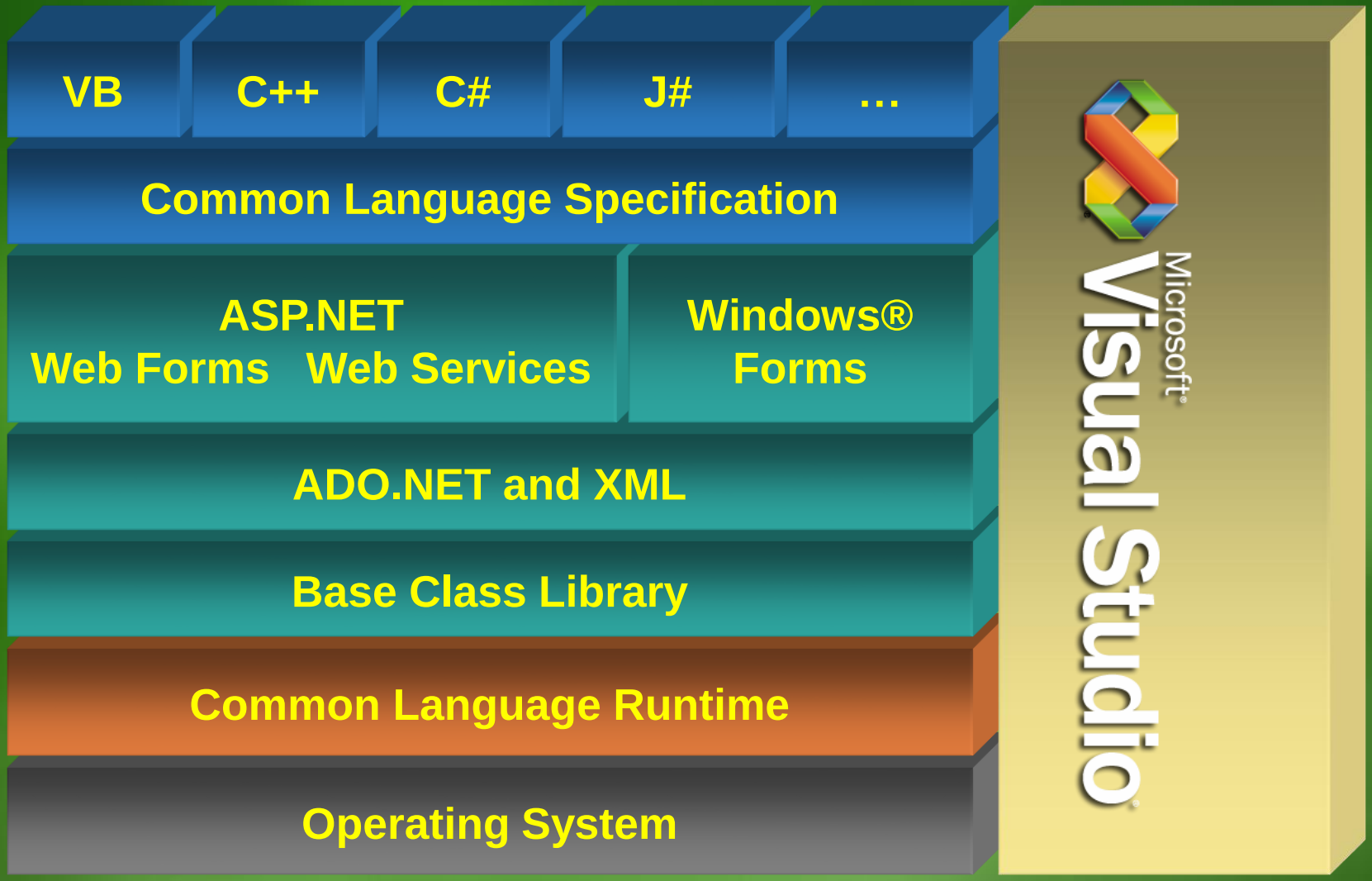
Microsoft .NET

XML Web Services across the Entire Microsoft Platform and Devices

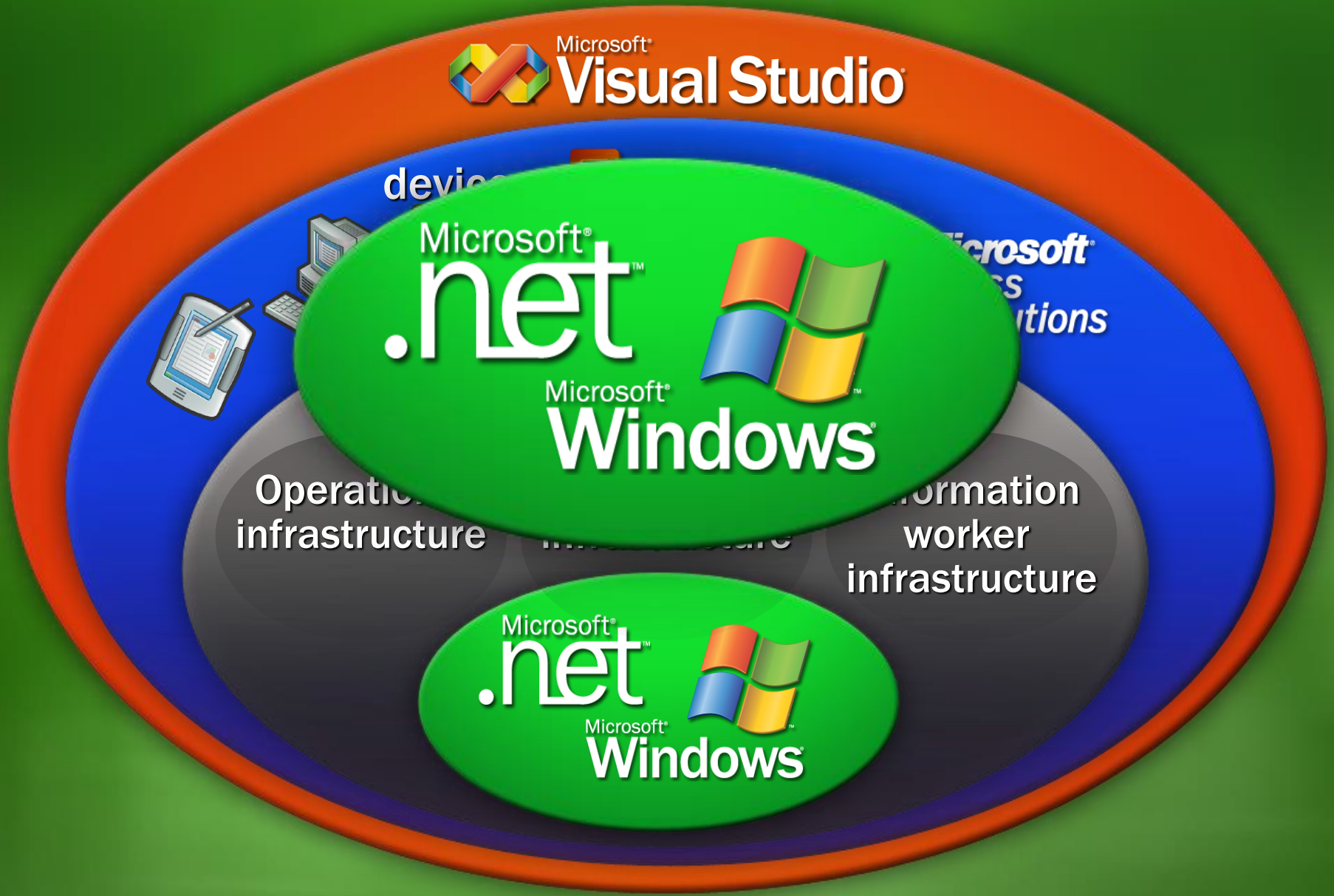


.NET Framework

Platform and Tools



The Microsoft Platform



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Service-Oriented Architecture

- An approach to take existing IT assets
- Think of these assets as technical capabilities: “services”
- Use these services, along with new services, to support business processes
- Reconfigure these services flexibly to support changes in business process

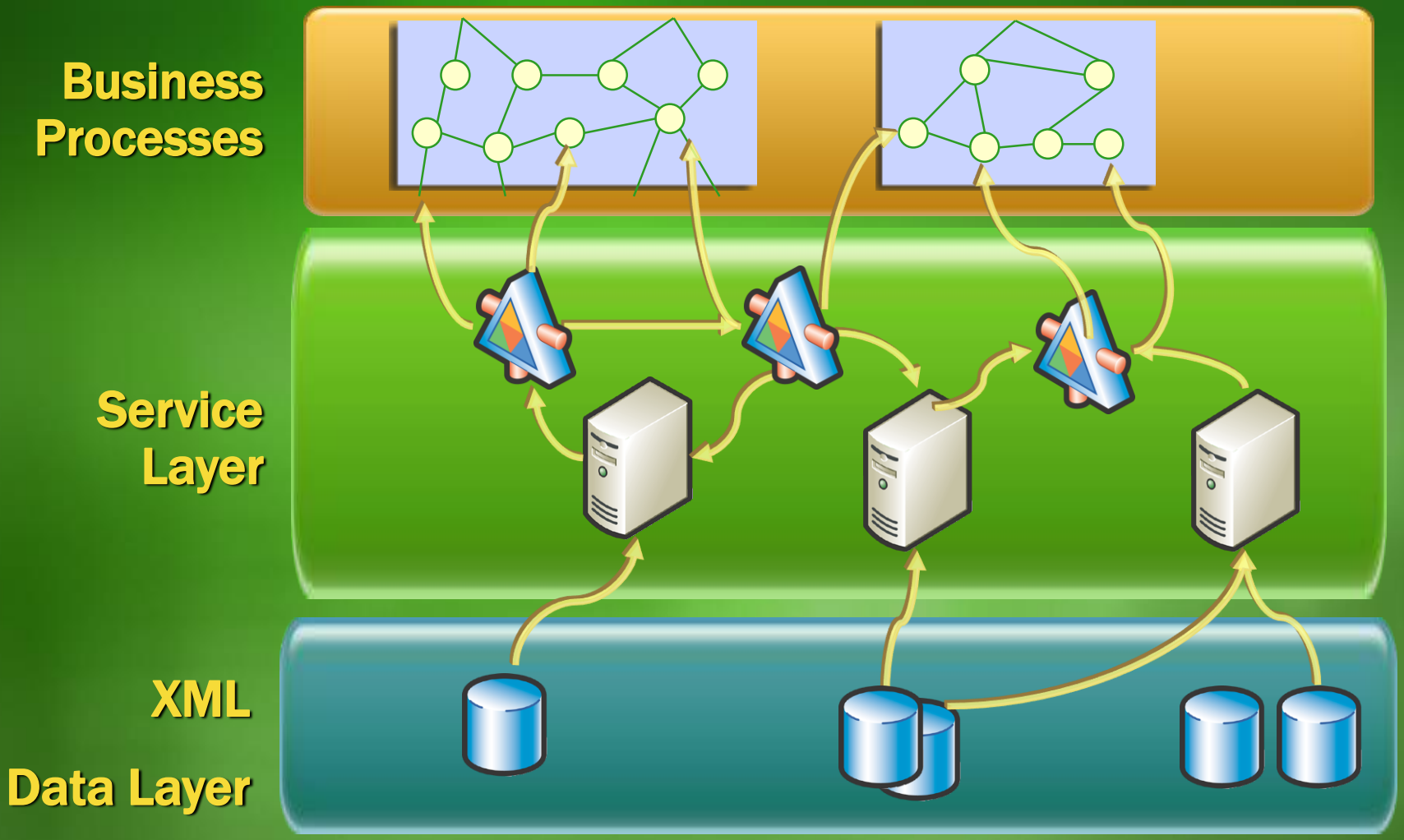
RtPM is a fantastic example of this

Road to SOA

Road to SOA

- Expose Data as XML
- Expose Applications as Services

Services Support Business Processes



Example: Procurement Process

InfoPath & Sharepoint

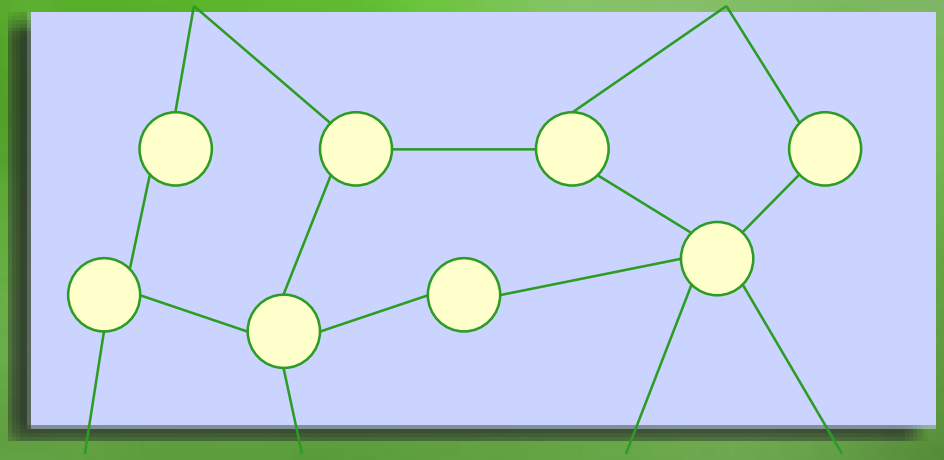
B2B Procurement System

Microsoft Windows Server System

SQL Server

Business Value comes from Business Process Improvement

- Generate economic value by improving the business process:
  - Remove steps that incur a cost
  - Improve speed so financial measures improve
  - Allow for new revenue opportunities



Key Ingredients

- .NET applications on Windows Server 2003
  - .NET Framework supports WS and XML development with Visual Studio
- “Smart Client” applications
  - i.e.: ProcessBook, RtWebParts
- Sharepoint as key collaboration service
- BizTalk for Orchestration, EAI
- InfoPath for structured data entry / front end for processes

RtPM example

- Take existing data from factory floor
- Make it available via XML and WS in a live, role-based, secured dashboard
- Operations management can use KPIs to make process improvement decisions
  - Example: condition based maintenance – avoid incurring a production stoppage; results in direct economic benefit
  - Example: crunch live data in Excel and automate regulatory report generation, saving time and reducing error rate

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