Microsoft .NET : Interoperability, Integration, & Legacy Applications

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Challenges for Governments

- Connect across organizational (funding) stovepipes.
- Adapt to rapidly changing missions and organizational structure.
- Rapidly deliver new capability from existing investments with minimum new investment.
- Integration "hurt" has reached the breaking point:
  - Systems not designed to work together
  - Interoperability requirement "came later"
  - Security is paramount but there is no coherent plan across government for security.
  - Integration is very expensive, time consuming, and brittle.
- Management of massive infrastructures and applications is excessively costly and severely limits the rate of upgrades, and the introduction of new applications and technology.

Industry response: XML Web Services

- Government challenges have the same pattern as commercial industry.
- “C” level executives (CFO, CEO, etc.) are driving the agenda
- Microsoft believes XML Web Services is a “disruptive technology.” *

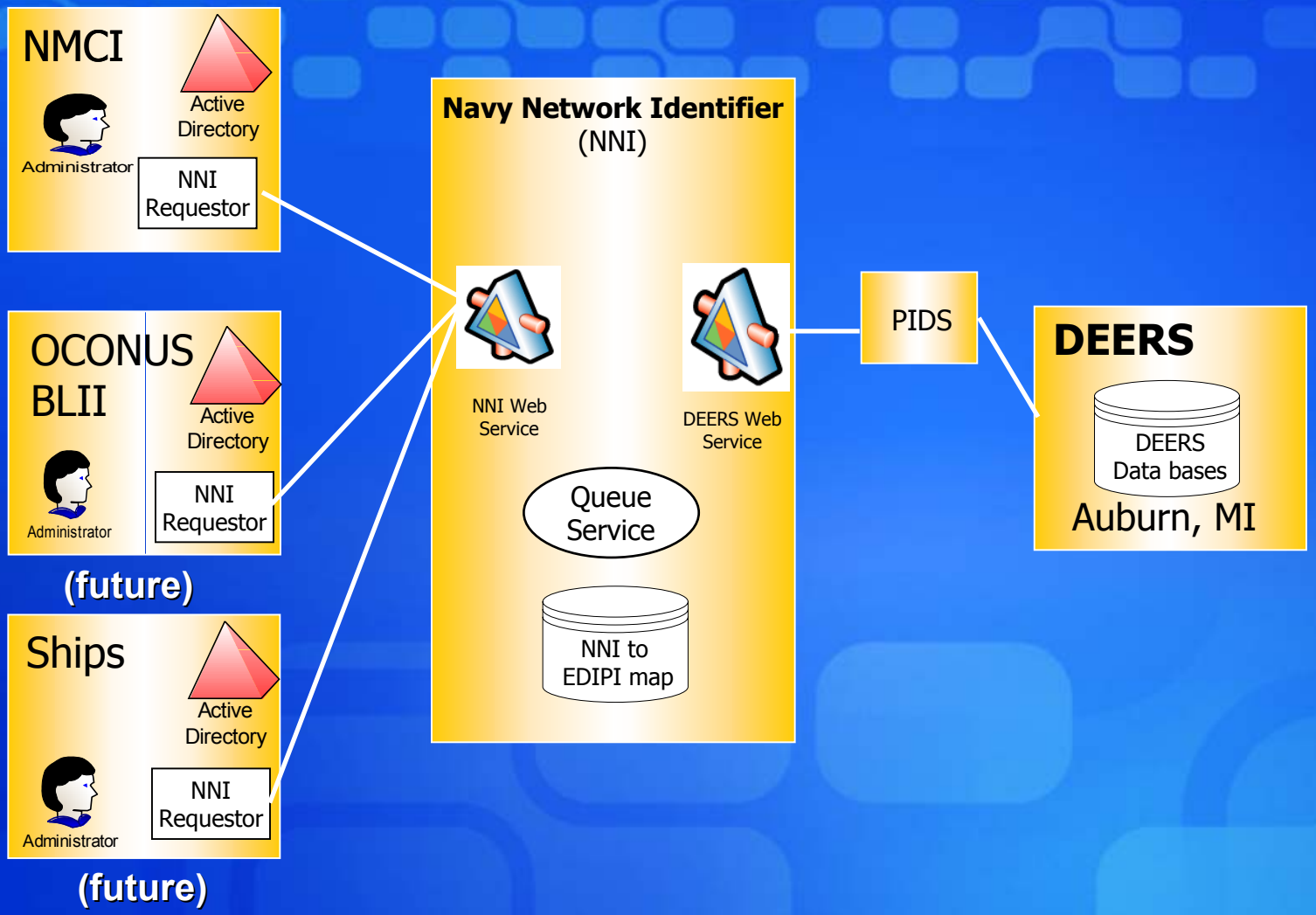
*(term from “the Innovator’s Dilemma”)

Case Study: NMCI

- Problem: Create an “identifier” that is unique in the entire Department of Defense for all civilian & military personnel world wide that are associated with the Navy.
- Solution: Provide a web service that creates & stores a unique identifier by using existing information in DEERS.

Navy Network Identifier (NNI)

Creating an identifier for each person that is unique in the entire Department of Defense



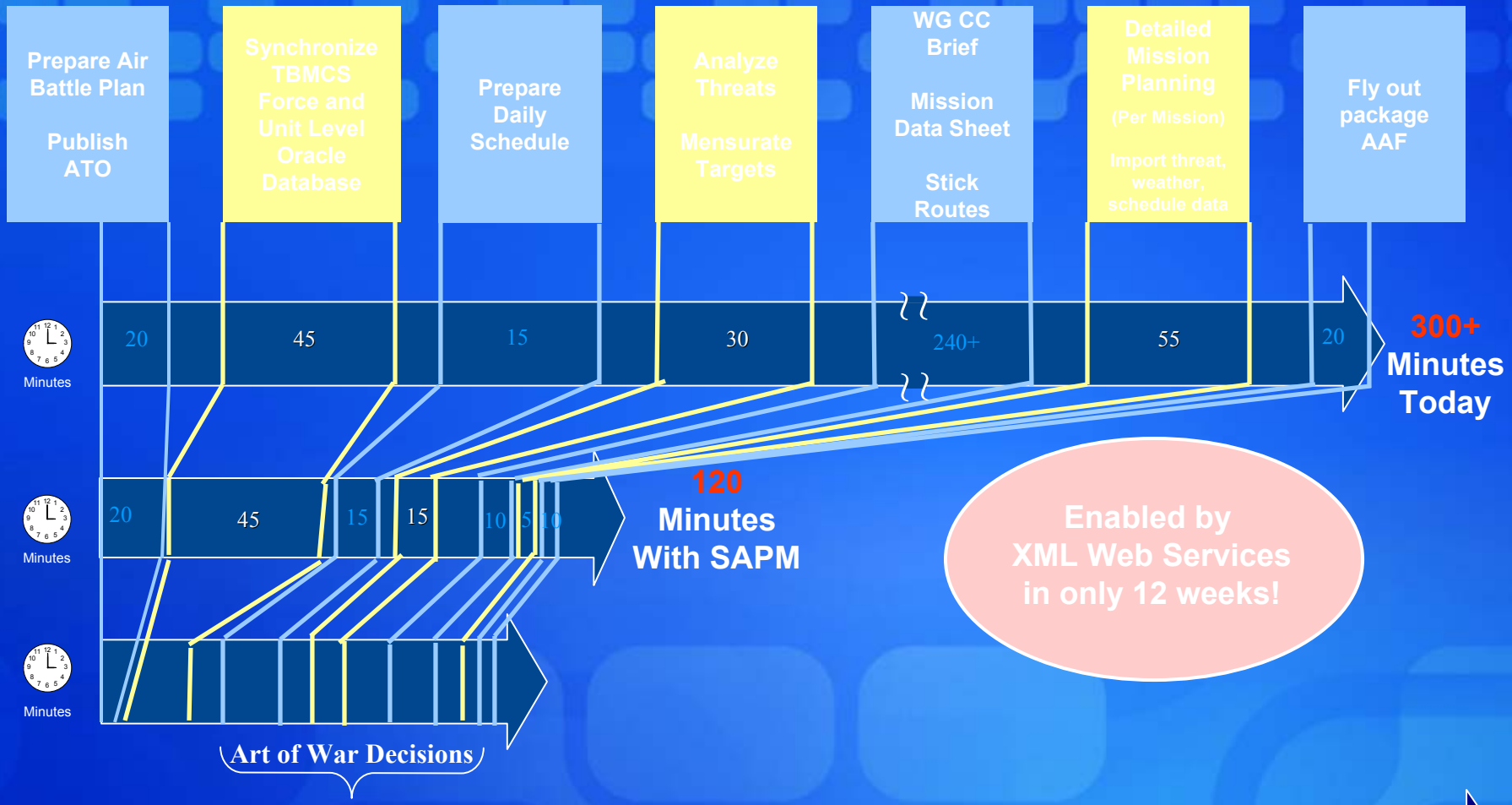
USAF Synchronized Air Power Management (SAPM)

- Multiple legacy systems are required to plan air missions.
- Information can not be exchanged between systems.
- Information had to be moved manually between systems and combined manually.
- Goals: reduce the time to plan missions, reduce manual labor, and improve process consistency

Achieved 60% reduction in mission planning time

Synchronized Air Power Management

Streamlining the process of servicing targets



90 Days…XML Web Services in Action!

Breaking Down Barriers with .Net

XML Web Services
New applications, work flow, etc.

Theater Battle Management Control System

MCS
Level

BEA WebLogic
(J2EE)

Sun Solaris
(UNIX)

Force Level
AODB
(Oracle)

TBMCS
Unit Level
(Ops)

Oracle 9i
And VB
(Microsoft COM)

Microsoft
Windows

Unit Level
AODB
(Oracle)

TBMCS
Unit Level
(Intel)

VB and C++
(Microsoft COM)

Microsoft
Windows

Unit Level
AODB
(Oracle)

Mission
Planning
(JMPS)

VB and C++
(Microsoft COM)

Microsoft
Windows

Microsoft
MSDE

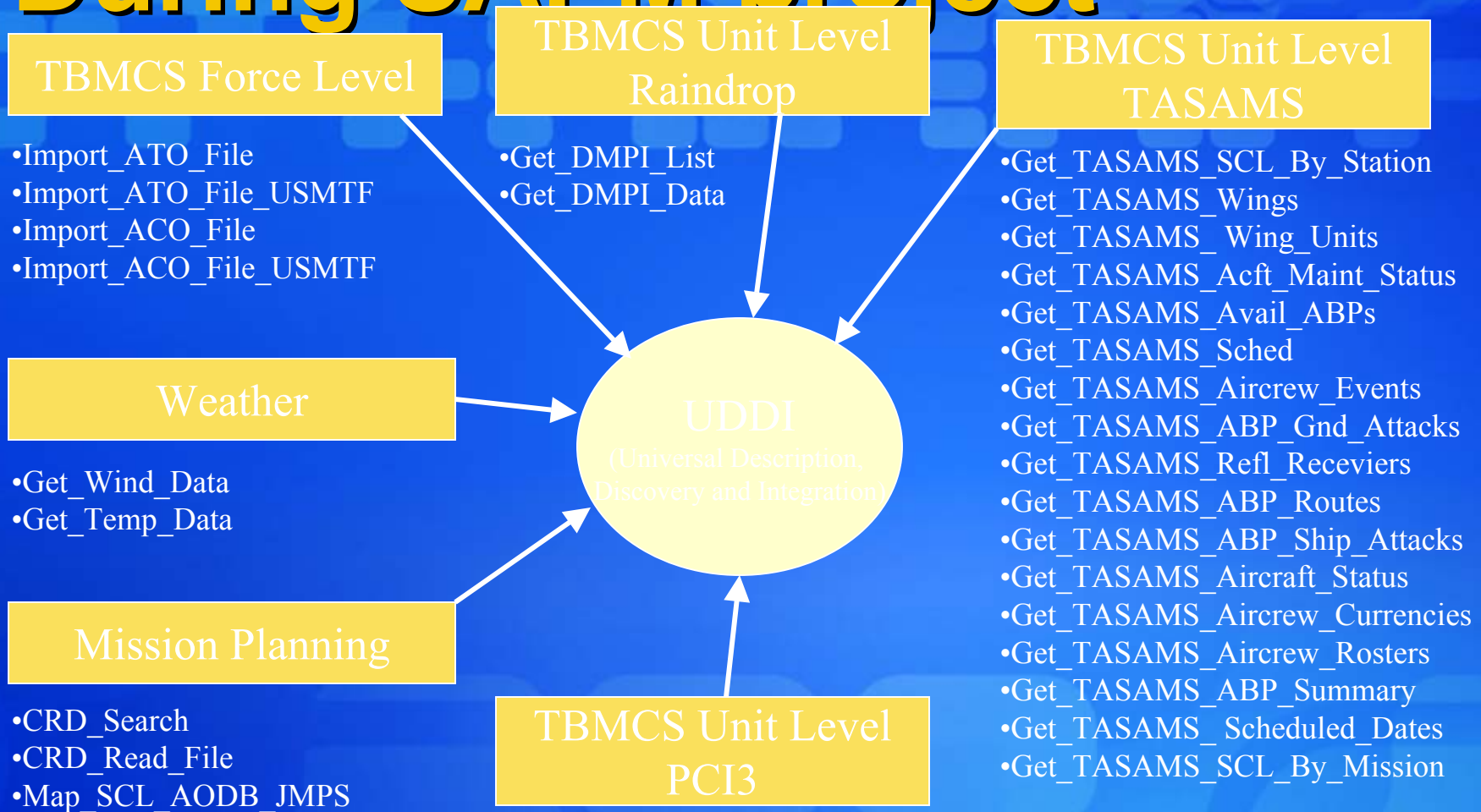
Air Force
Weather

ColdFusion

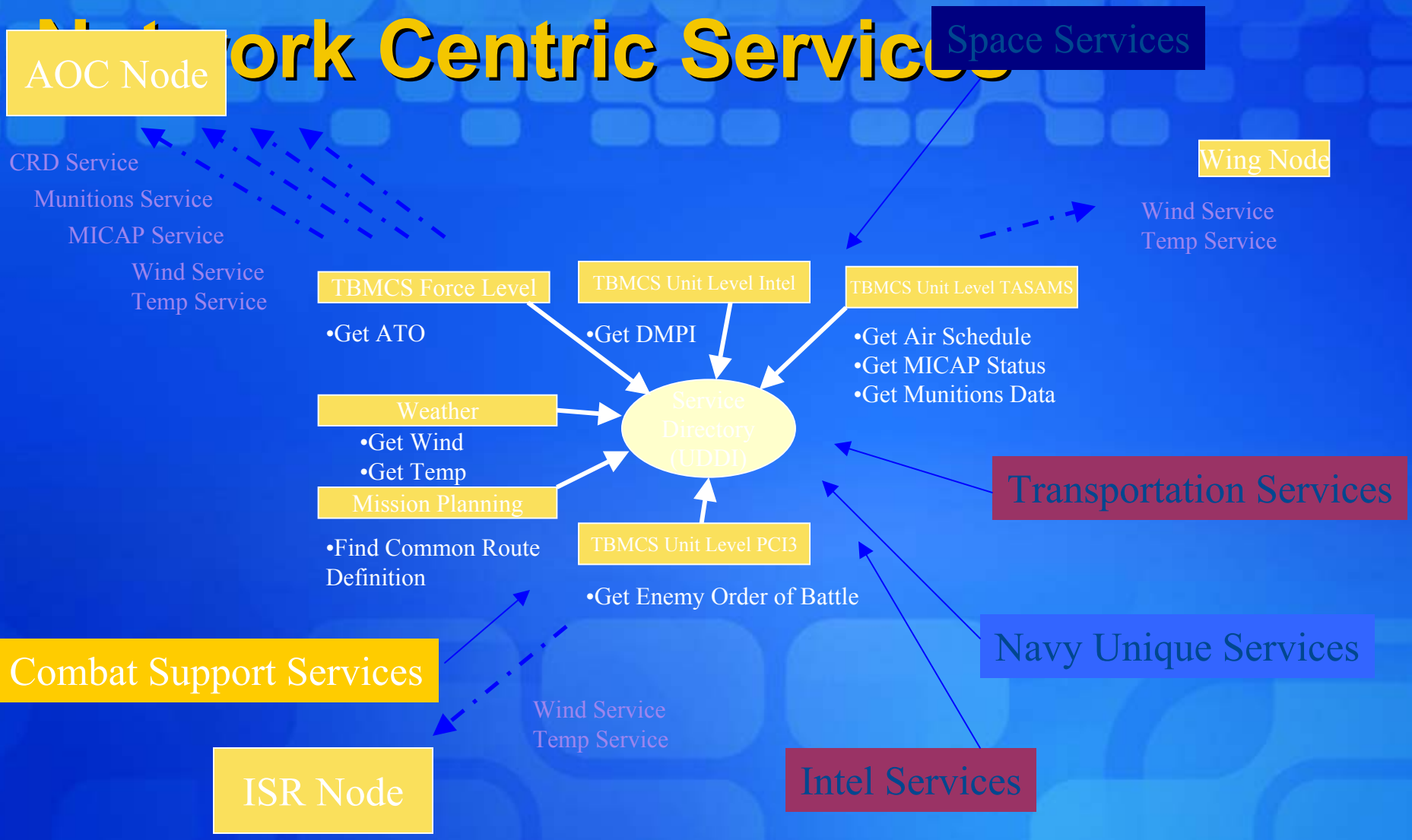
Sun Solaris
(UNIX)

Oracle

Web Services Published During SAPM project



Realizing the True Potential of Web Services
Network Centric Services



Case Study

US Navy Reserve Mobilization

- Problem:
  - Multiple manual entries of data, partially manual processes, and inconsistent processes across different organizations at different sites led to data inconsistency & errors.
  - An important legacy system did not meet new security and inter-operability requirements (NMCI).
  - No “visibility” in status of processes.
- Solution:
  - Rapidly develop an application that connects processes across different organizations & make information available as web services.
  - Rebuild a legacy application in new technology (ASP.NET)
  - Provide status reporting/tracking.
  - “Expose” information as a web services when ever there was probability that other applications could use the information.

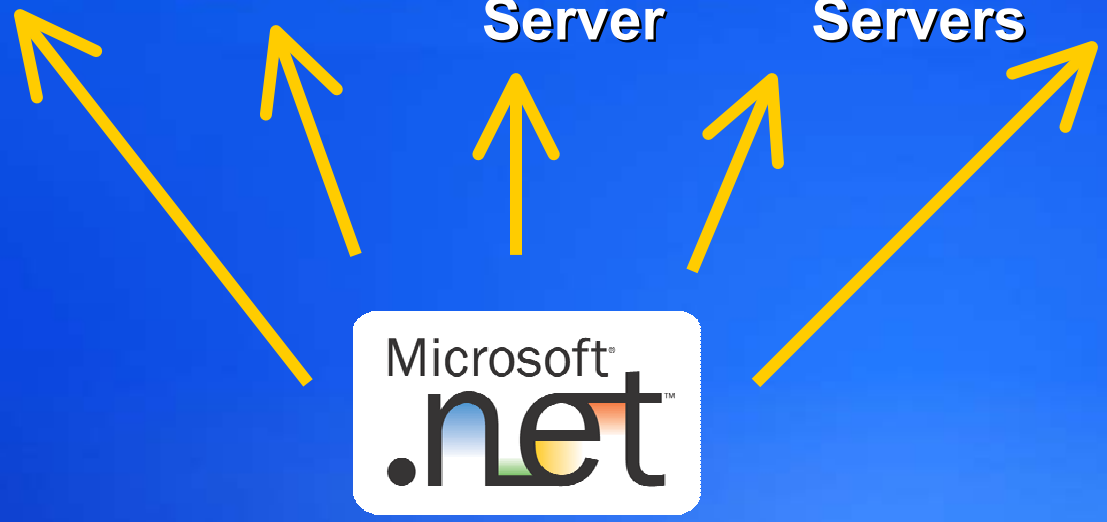
US Navy Reserve Mobilization Project

- 6 weeks to develop/deploy, 2 weeks to test/train – 8 weeks total (plus one month of discovering & documenting the process!)
- Re-wrote legacy application in ASP.NET (reduced code from 80K to 10K lines) in a purely web based application.
- Created a new “orders writing” module that automated manual processes and removed stand alone applications & tools. Changed order writing process to write orders in one location instead of 14.
- Delivered requirements tracking module as proof of concept.
- Created 4 web services to supply information to other applications.

Web services and .NET made it feasible for Navy organizations to focus on execution and rapid improvement of their mutual processes.

Microsoft Enterprise Software

Visual Studio | Office | Windows Server | Enterprise Servers | Windows XP



- Connected
- Fastest Time to Value
- Best Economics
- Dependability

Microsoft's value proposition:

- **Connected:**
  - Integrate internal and external parts of the operation while leveraging previous IT investments
  - Connect what you have and ***will have***.
- **Productive**
  - Drive the organization and processes to operate more efficiently and effectively – from individuals to the overall organization.
- **Best Economics**
  - Optimize existing and new IT investments across the organization to realize the best "time to value" and drive new capabilities.
- **Dependable**
  - Mission critical, global class dependability.
  - Collaborate with a world class technology leader.

Review

.NET is a key technological ingredient for rapidly, economically, and dependably connecting information, people, systems, and devices, *now!*

Microsoft's goal in our relationship:

- We do ***not*** want to be "another vendor".
- We do ***not*** want to become a Systems Integrator.

- We ***do*** want to earn the position of a strategic partner.

Thank You