HP NonStop + HP-UX = Hybrid

Steven E. Saltwick
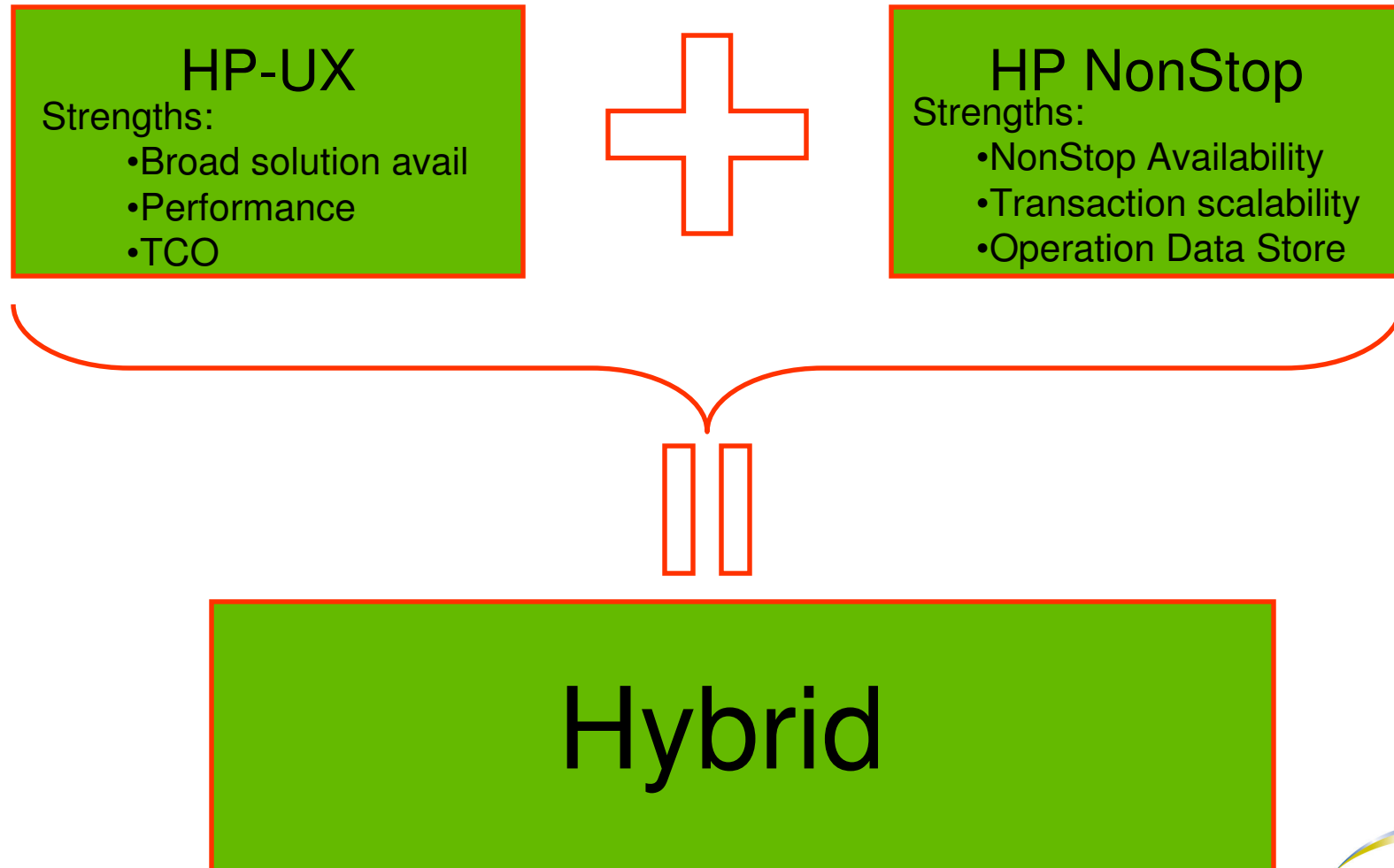Director, Business Development
NonStop Enterprise Division

Martin Whittaker
Director, Engineering
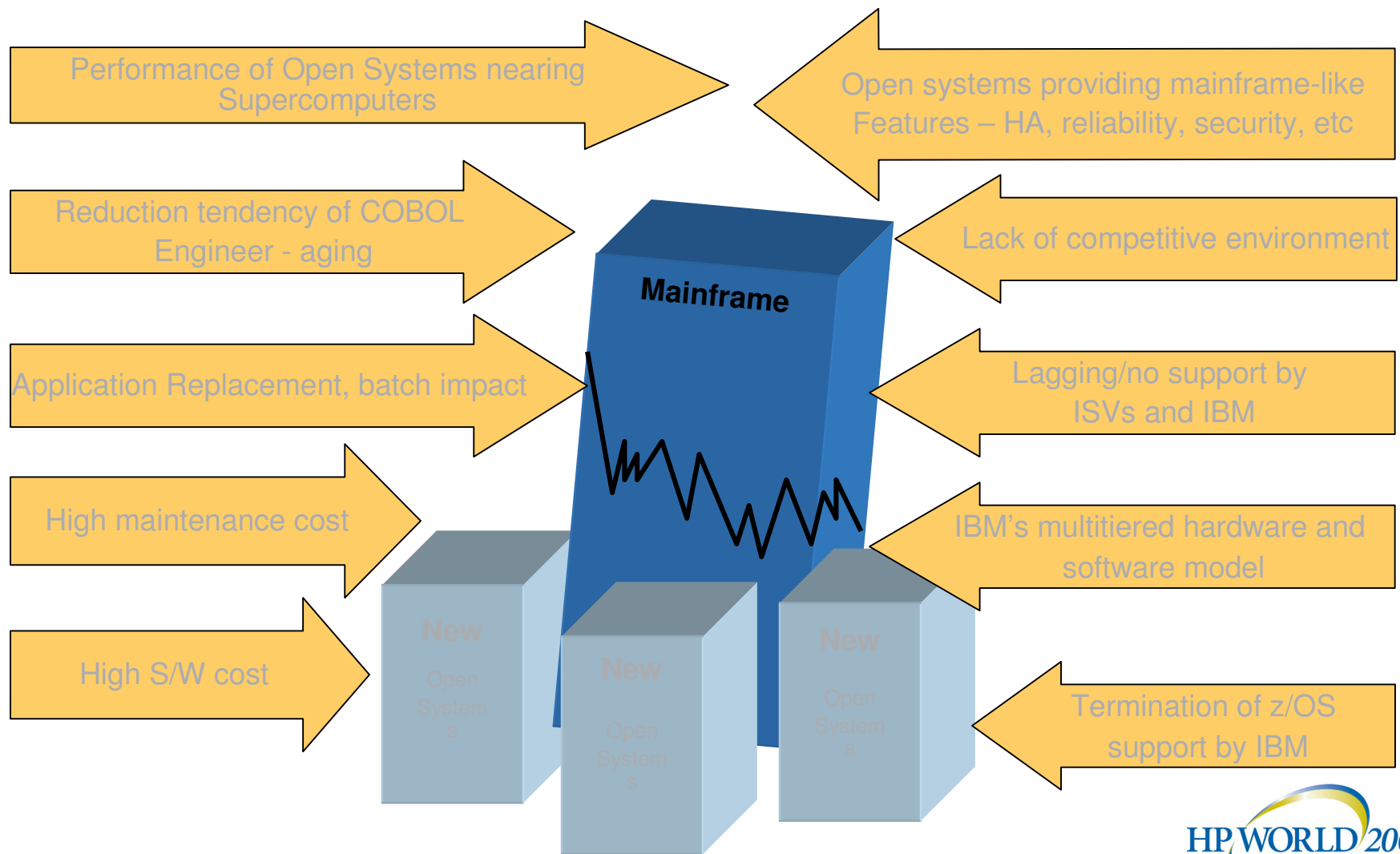Enterprise Unix Division

Agenda

- Program Context

- Program Definition

- Market Proof-points

- Initial Market Entry Segment

- Key ISV Status

- Future Directions

Hybrid Value Proposition
The Power of +

HP-UX
Strengths:
- Broad solution avail
- Performance
- TCO

+

HP NonStop
Strengths:
- NonStop Availability
- Transaction scalability
- Operation Data Store

=

Hybrid

Hybrid – Why Now? Summary

Performance of Open Systems nearing Supercomputers

Open systems providing mainframe-like Features – HA, reliability, security, etc

Reduction tendency of COBOL Engineer - aging

Lack of competitive environment

Mainframe

Application Replacement, batch impact

Lagging/no support by ISVs and IBM

High maintenance cost

IBM's multitiered hardware and software model

High S/W cost

New Open Systems

New Open Systems

New Open Systems

Termination of z/OS support by IBM

Source: Gartner, META, Aberdeen, TechTarget, IDC, Anderson Consulting, Cambridge Consulting, etc

Agenda

- Program Context
- Program Definition
- Market Proofpoints
- Initial Market Entry Segment
- Key ISV Status
- Future Directions

NSK + HP-UX "Hybrid" Program

Objectives:

1. Provide SOLUTIONS to selected sections of the "MainFrame/High End" market:
    - Start with a "better together" HP-UX+NSK "Hybrid" since it already provides the majority of the required "MainFrame" feature/functionality AND "future proofs" existing customer environments.
    - Start with the Banking/Financial Services industry, working with a core set of specialized ISVs, since this provides the most traction and value-add.
2. Develop deep relationships with key lighthouse accounts that can help HP iterate the "Hybrid" offering into long term strategic programs.

Sponsors: Xuan Bui, Pauline Nist

Program Leads: Mike Elson, Steve Saltwick, Bob Kennedy

Team Leads:
- NED: Steve Saltwick, Bob Taylor, Mike Dowers, Arun Gaur, Nick Beason, Keith Evans
- BCS: Mike Elson, Bob Kennedy, Dan Osecky, Cindi Schell, Carl Gallozzi
- HPS: Joe Lott
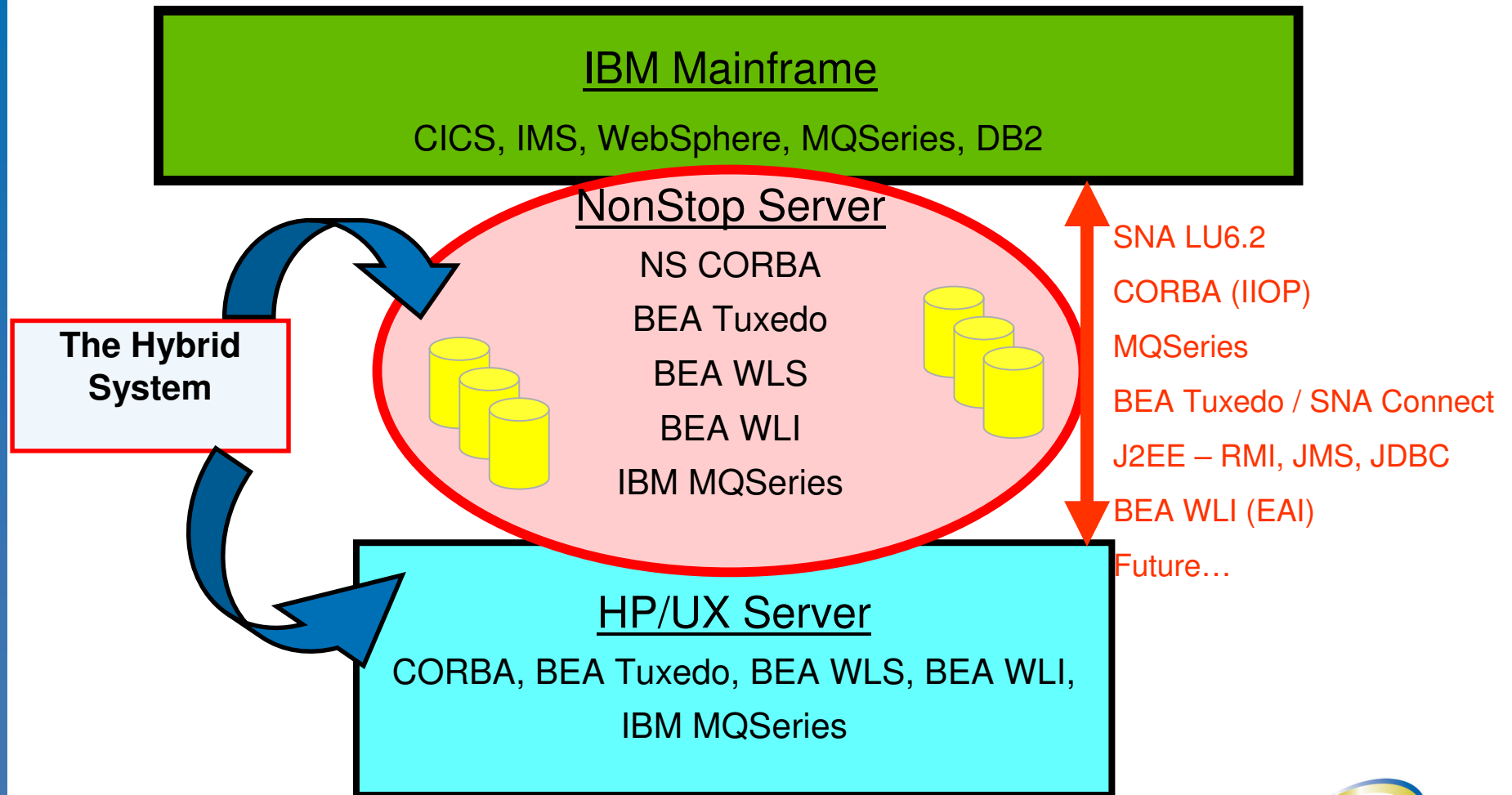
Hybrid Solutions Definition

Hybrid IS:

- One or more NonStop & HP-UX systems providing an "integrated" solution
  - A heterogeneous multi-tier system
  - But providing end-to-end availability, enhanced manageability
  - Capitalizing on the continuous availability of the NonStop system along with the cost effective scaleable performance of HP-UX
  - End-to-end solution tested and characterized
  - Supported through a standard field support contract
  - HP Services engagement
  - Targets specific markets with a tool box for C&I customization

Hybrid is NOT:

- HP-UX running on a NonStop system
- NSK running on a partition of an HP 9000

Hybrid Architecture

IBM Mainframe

CICS, IMS, WebSphere, MQSeries, DB2

The Hybrid System

NonStop Server

NS CORBA

BEA Tuxedo

BEA WLS

BEA WLI

IBM MQSeries

HP/UX Server

CORBA, BEA Tuxedo, BEA WLS, BEA WLI,

IBM MQSeries

SNA LU6.2

CORBA (IIOP)

MQSeries

BEA Tuxedo / SNA Connect

J2EE – RMI, JMS, JDBC

BEA WLI (EAI)

Future…

Agenda

- Program Context

- Program Definition

- Market Proofpoints

- Initial Market Entry Segment

- Key ISV Status

- Future Directions

Sabre – ATSE Hybrid HP-UX Solution Stack

- **Customer Type**
  - **Distributor of Travel**

- **Project:**
  - **Migrate Leading online travel reservation system from MF for enterprise integration and transaction growth.**

- **Project Value**
  - **HW/SW sales – part of >$100M deal.**

- **Project scope**
  - **Four-year program designed to migrate airfare pricing, schedules, and seat availability.**

- **Market differentiator**
  - **World's largest distributor of travel with 40% of the reservation business.**
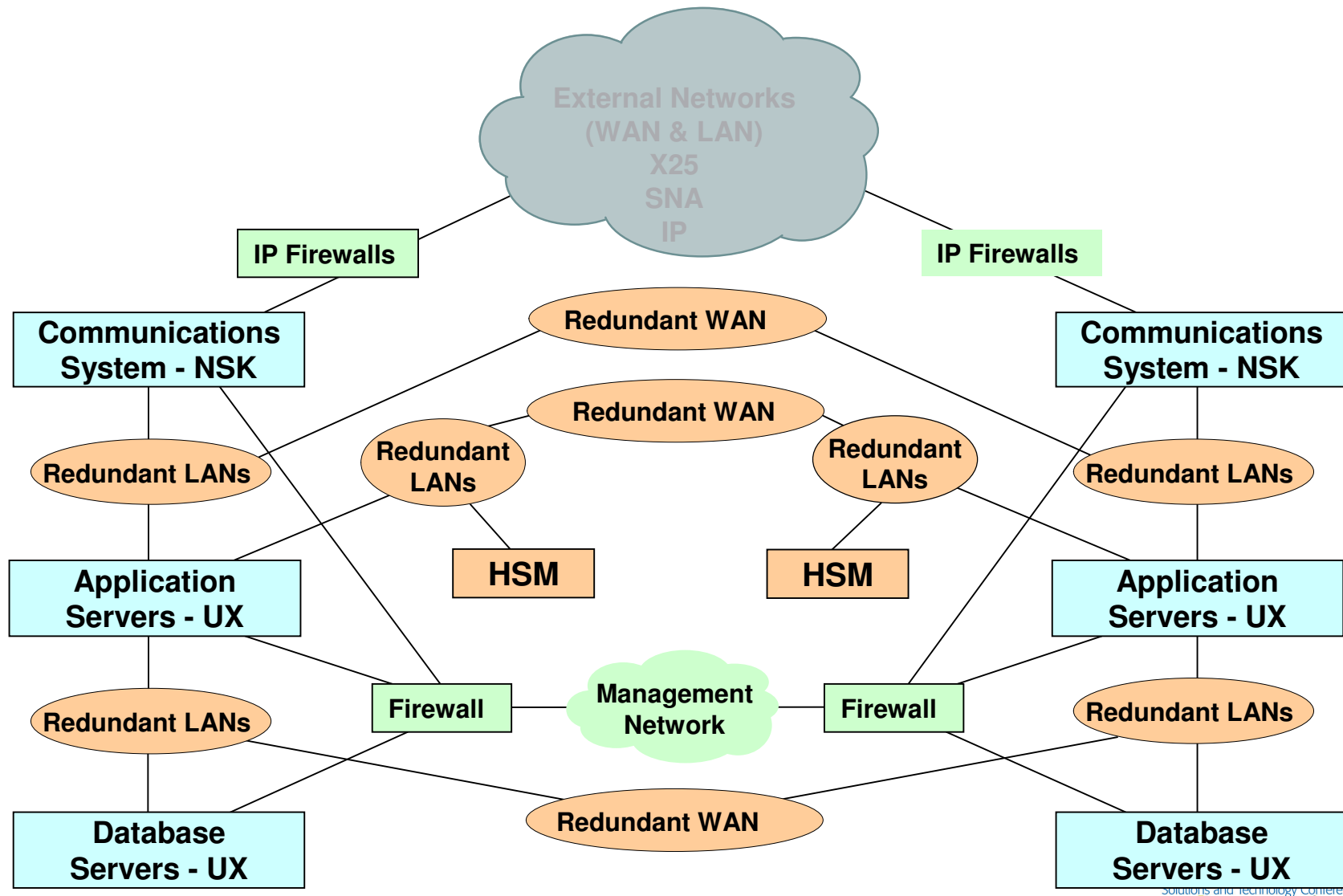
Sabre Hybrid Architecture

- NonStop
  - 17X16CPU (S86000)
  - Dual SQL/MP database

- HP-UX
  - 28 HP-UX 11i 5405 servers
  - 15 Linux RedHat Advanced Server 2.1 IA64 HP5670 servers

- Linux
  - Expect to add "hundreds" of linux servers
  to hybrid server farm

TPF

Corba Services

HP Non-Stop Himalaya Nodes

Hybrid Server Farm
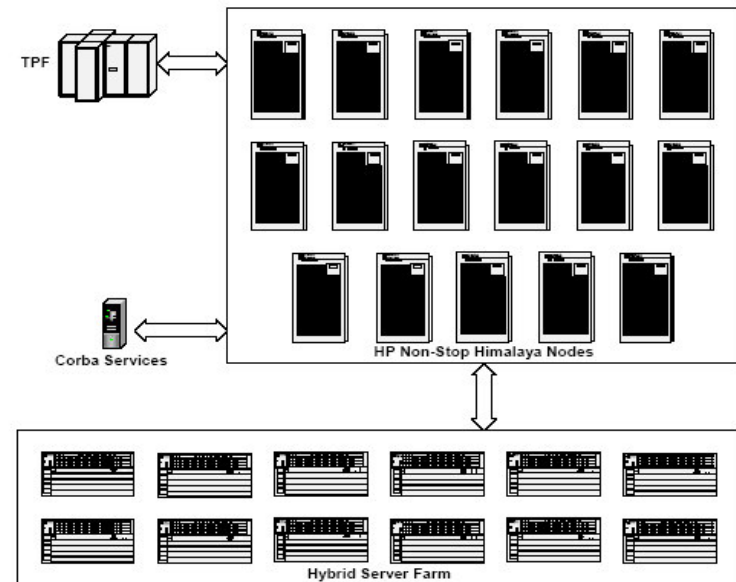
Hybrid benefit to Sabre

– Availability and Transaction capacity/response equivalent to TPF

– TCO lower by >50%
  • Industry standard application environment (C++/Corba) and relational database enhanced programmer productivity

– NonStop relational database allowed new uses of data, new services

– HP-UX and MySQL
  allowed less critical transactions to be run more cost effectively while maintaining integrated data

Hybrid System for Major Bank

External Networks
(WAN & LAN)
X25
SNA
IP

IP Firewalls

IP Firewalls

Communications
System - NSK

Communications
System - NSK

Redundant WAN

Redundant WAN

Redundant LANs

Redundant
LANs

Redundant
LANs

Redundant LANs

Application
Servers - UX

HSM

HSM

Application
Servers - UX

Redundant LANs

Firewall

Management
Network

Firewall

Redundant LANs

Database
Servers - UX

Redundant WAN

Database
Servers - UX

13

Hardware – Production Sizings

Communications Server

– NonStop S7604, 4 CPU

Application Server

– Integrity Itanium 2, rx5670, 4 CPU, 16GB Memory

Database Server

– Integrity Itanium 2, rx5670, 4 CPU, 32GB Memory
– EVA 3000s
  - VSTS & STS, 390GB
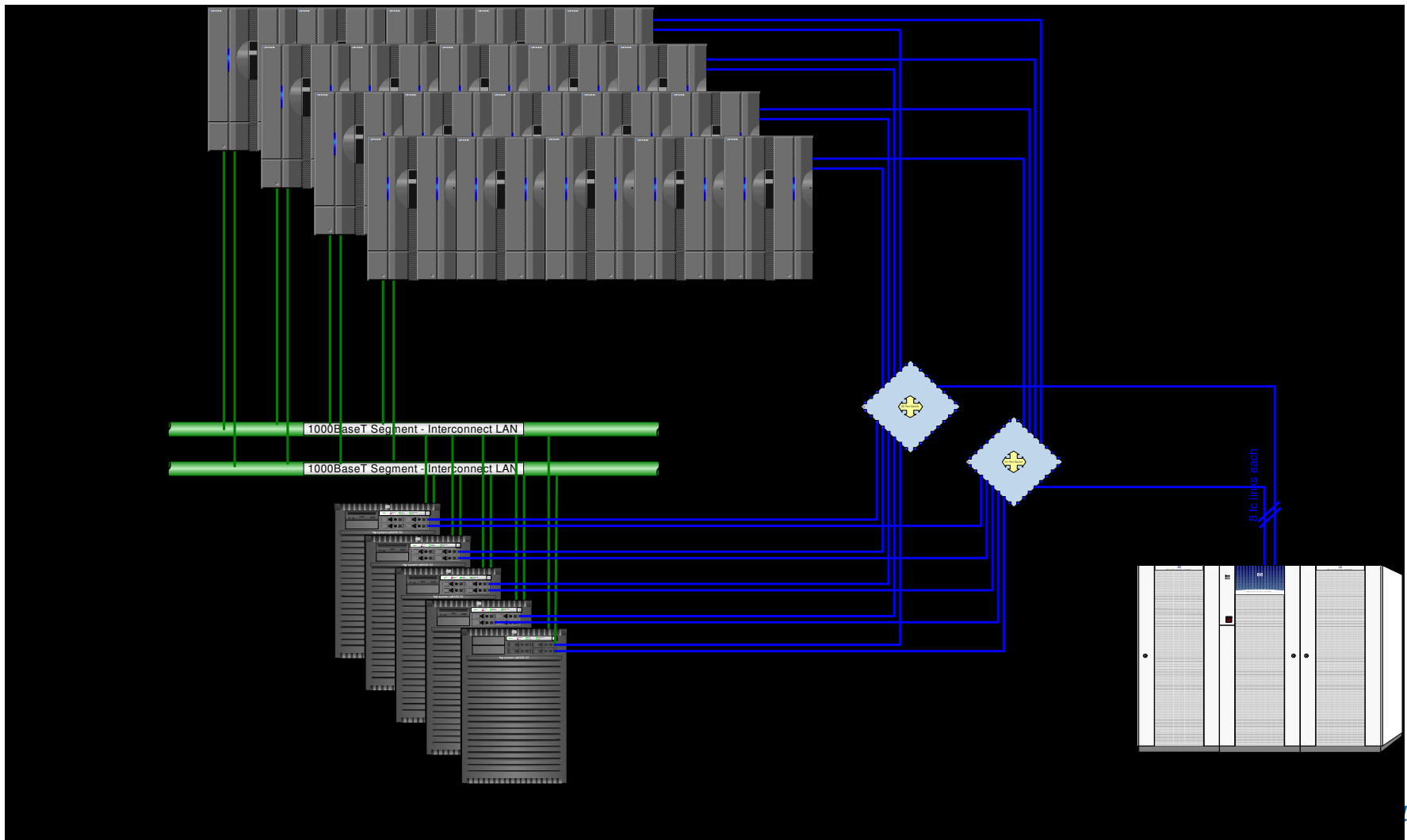 - Redo logs, undo tables, 390GB
  - LTS, 2.4TB

Management Server

– Dual rp2470, 2 CPU, 4GB memory

HSM (Hardware Security Module)

– 1200 function calls per sec, dual ported

Nonstop & HP UX Hybrid: Telecommunications Proposed Architecture

1000BaseT Segment - Interconnect LAN

1000BaseT Segment - Interconnect LAN

8 to links each

Agenda

- Program Context

- Program Definition

- Market Proofpoints

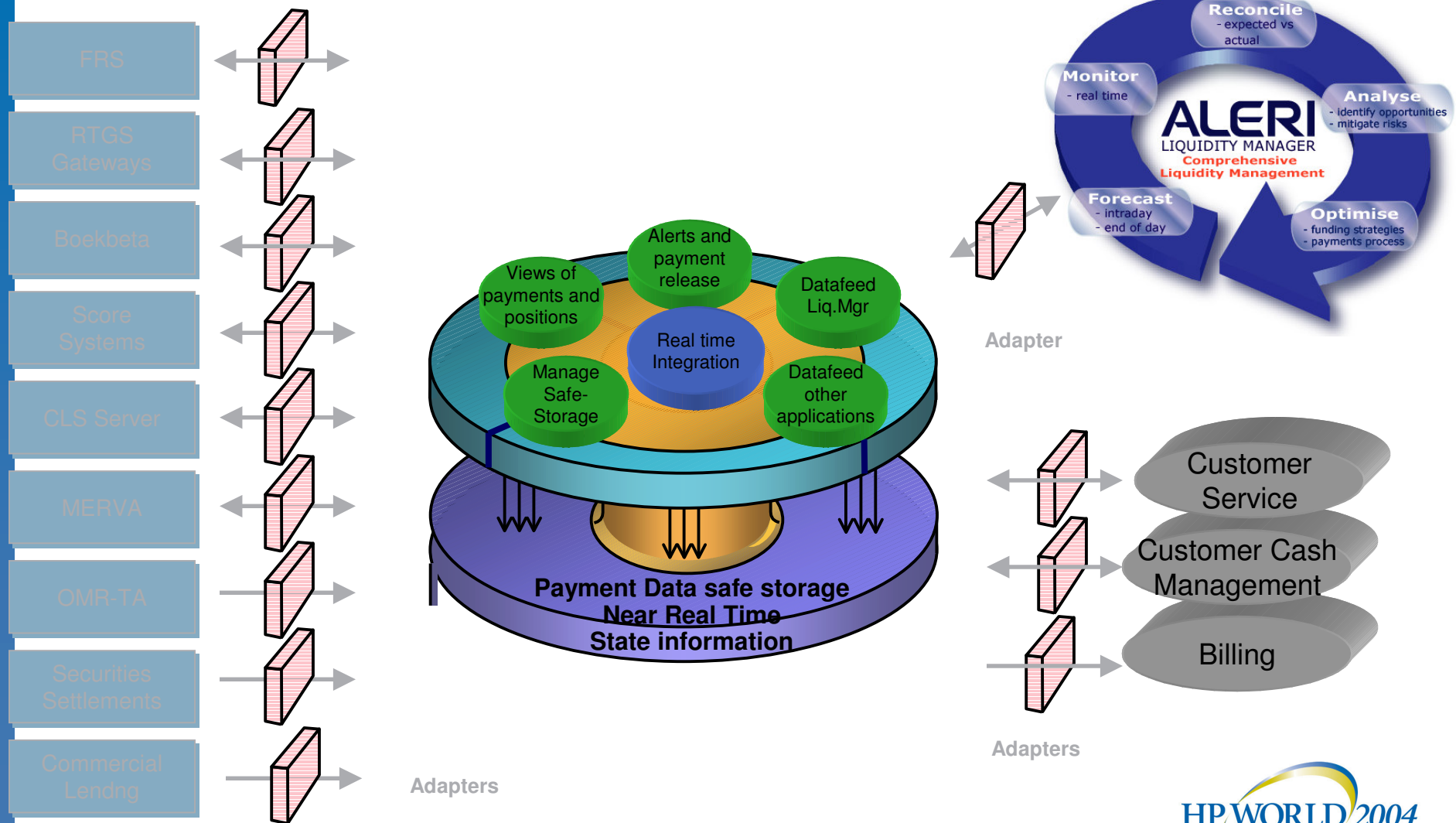- Initial Market Entry Segment

- Key ISV Status

- Future Directions

Available Niches to a Hybrid Solution As Hp sees it…

- Legacy "Conversions" – AVAILABLE, but
  - Technically very difficult to provide a true legacy conversion
  - Mixed results reported
  - Mainframe J2EE immature (GG)

- New "Integration Contexts" – BEST TARGET NICHE
  - 80% of IS orgs predicted to re-use apps, rather than re-write (GG)
  - 35% of "mission critical" apps expected to be "wrapped" in new solutions by 2006

Agenda

- Program Context

- Program Definition

- Market Proofpoints

- Initial Market Entry Segment

- Key ISV Status

- Future Directions

HP WORLD 2004
Solutions and Technology Conference & Expo

Real Time Global Liquidity Management

FRS

RTGS Gateways

Boekbeta

Score Systems

CLS Server

MERVA

OMR-TA

Securities Settlements

Commercial Lendng

Adapters

Views of payments and positions

Alerts and payment release

Datafeed Liq.Mgr

Real time Integration

Manage Safe-Storage

Datafeed other applications

Payment Data safe storage
Near Real Time
State information

Reconcile
- expected vs actual

Monitor
- real time

Analyse
- identify opportunities
- mitigate risks

ALERI
LIQUIDITY MANAGER
Comprehensive
Liquidity Management

Forecast
- intraday
- end of day

Optimise
- funding strategies
- payments process

Adapter

Customer Service

Customer Cash Management

Billing

Adapters

HP WORLD 2004
Solutions and Technology Conference & Expo

Liquidity Management – Value Proposition

- Consolidate expected and actual cash flow and collateral information
  - in-real time
  - from internal and external systems
  - Across all clearing channels, currencies and business entities
  - …..Reduce operational costs and provide complete information

- Forecast intra-day liquidity positions
  - By time
  - By multiple configurable criteria
  - ….. Minimise funding costs and reduce operational risk
    (1% = £1M savings pa)

- Reconcile expected and actual events
  - As activity occurs
  - ….. Reduce cash and collateral balance requirements

- Monitor intra-day liquidity utilisation

  ….. Improve liquidity utilisation

- Analyse liquidity information
  - Current, future and historical data
  - To identify trends, opportunities and business opportunities
  - ….. Identify optimal liquidity strategies

ALERI

HP WORLD 2004
Solutions and Technology Conference & Expo

ACI: A JOINT NonStop & HP-UX ISV

Staggering Numbers

- Our U.S. customers processed over 3.5 billion ATM transactions last year

- Our UK customers processed over 6 billion ATM/POS transactions last year

- Our Australian customers processed over 2 billion ATM/POS transactions last year

- Our customers worldwide processed over 32 billion e-payment transactions last year

  – That's over **$1,600,000,000,000 ($1.6T)**

  – BTW: GDP of France, UK, CA

  are each all ~ **$1.3T**

Scope of Hybrid Potential
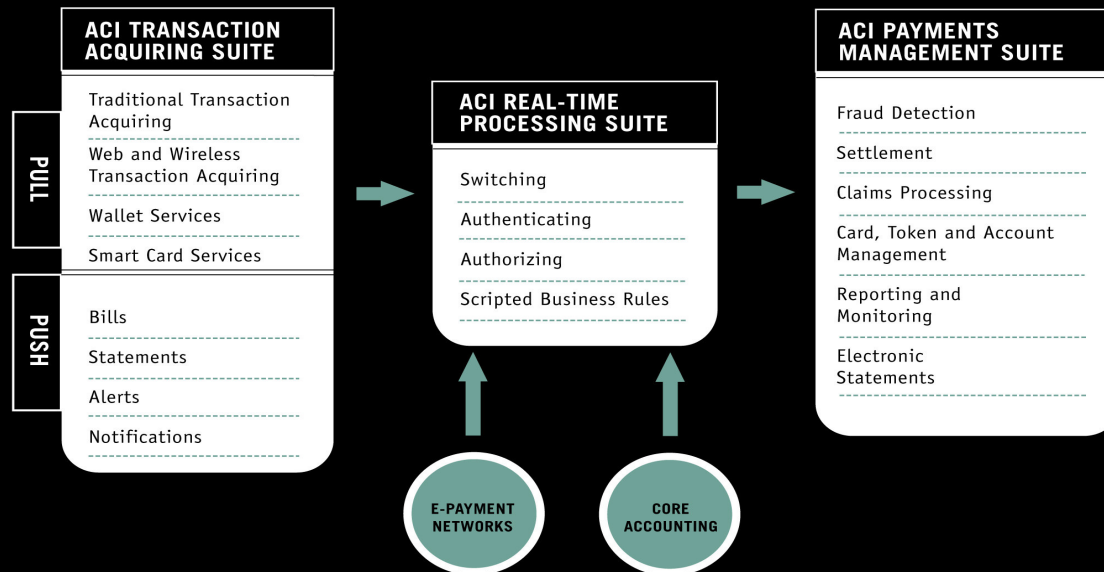
Some key facts on LogicaCMG

- LogicaCMG (£1.8B turnover)
    - Conducts more than half of the world's energy trades
    - Delivers 75% of the world's text messaging traffic
    - Has delivered more than 400 SAP implementations
    - Has 40 of the world's top 50 banks as clients
    - Transfers funds for 150 international banks
    - Provides regulatory software for 250 banks
    - Built the national payments infrastructures for 25 countries
    - Is the world's leading provider of managed training services
    - Processes 20m payslips per annum
    - Brings the weather worldwide to you and 2bn others
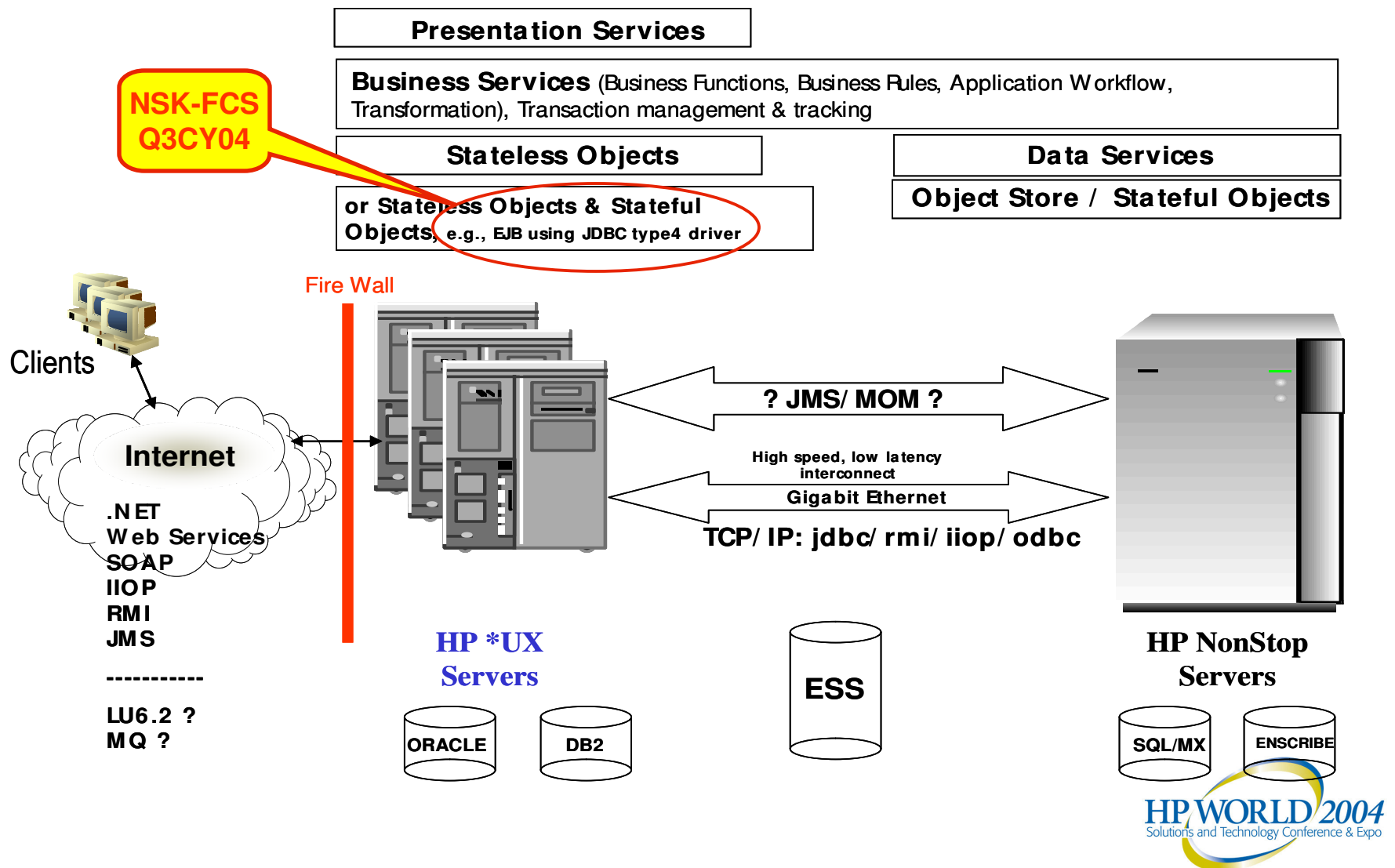
LogicaCMG Agreement on Hybrid

- Nick Caplan, Managing Director of Financial Services executive sponsor

- Full participation in outbound communications
  - Logica Payments Architecture (LPA) focus
  - Sales intelligence and collateral
  - HPS (FSI) joint planning meeting and alignment
    - MIRVA application replacement program
    - Billing Presentment program
    - Liquidity Management

- Proceeding with Hybrid for next generation Logica BESS application (wire transfer/wholesale payments)

Agenda

- Program Context

- Program Definition

- Market Proofpoints

- Initial Market Entry Segment

- Key ISV Status

- Future Directions

Working Future Architecture

Presentation Services

Business Services (Business Functions, Business Rules, Application Workflow, Transformation), Transaction management & tracking

NSK-FCS Q3CY04

Stateless Objects

Data Services

or Stateless Objects & Stateful Objects, e.g., EJB using JDBC type4 driver

Object Store / Stateful Objects

Fire Wall

Clients

Internet

.NET
Web Services
SOAP
IIOP
RMI
JMS

LU6.2 ?
MQ ?

? JMS/MOM ?

High speed, low latency interconnect

Gigabit Ethernet

TCP/IP: jdbc/rmi/iiop/odbc

HP *UX Servers

ORACLE   DB2

ESS

HP NonStop Servers

SQL/MX   ENSCRIBE

Discussion

- Do you have an account where this solution set could win a project? If so, what is the essential characteristics?

- Is there a "big thing" missing?

- Do you know an ISV that is a good target, and could help us sell them?

Co-produced by: