Migration der UBS-Kernapplikationen von Unisys nach z/OS - best practice

Referent: Guido Salvi, Consultant & Projektleiter des UBS-Projektes

Führend im Application Portfolio Management

- Hersteller von Mainframe Assessment, COBOL Entwicklungs- und Deployment Software
  - 1976 gegründet und seit August 2001 wieder unabhängig
  - International tätiges Unternehmen mit 490 Mitarbeitern
  - Weltweite Niederlassungen u.a. in den USA, Deutschland und Japan
- Blue Chip Kundenbasis
  - 5.000 Kunden weltweit
  - 80% der Global 2000 / 91 der Fortune 100
  - Über 1 Millionen lizenzierte Anwender
  - Weltweite ISV Partner (PeopleSoft, Lawson Assoc, CSC…)
  - Starke SI Partnergemeinde
- UK Börsennotiertes, unhabhängiges Softwareunternehmen
  - 1976 gegründet
- Übernahme von hal knowledge solutions mit Wirkung vom 3. November 2006
  - Integration der Lösungen Kb-AIM Code zur Analyse der Applikationsobjekte und Kb-AIM Data zur Datenstrukturanalyse und Testumgebungsaufbau

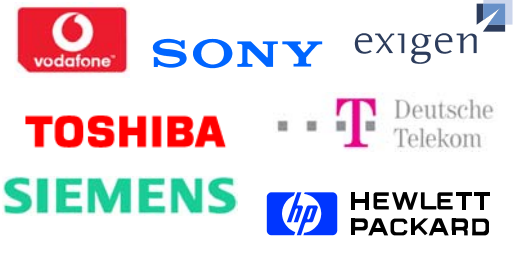
Micro Focus unterstützt Branchenübergreifend

Finanzdienstleistungen

Verarbeitende Industrie

Gesundheitswesen

Telekommunikation



Handel / Anders

ISVs und Systemhäuser

Über 90 der Global Fortune 100 Unternehmen

Micro Focus modernisierte unser COBOL, hat es in eine high-tech Lösung verwandelt – die richtigen Werkzeuge für die Zukunft.” Vice President Development Deutsche Bank

Micro Focus Lösungen

Assessment

Bewertung und Analyse von Mainframe Bestand um weitere Optionen erwägen zu können

Application Modernisation

Entwicklung & Test außerhalb des Mainframes & Erweiterung nach SOA

Application Migration

Verlagerung von App's auf kostengünstigere, zeitgemäße Plattformen

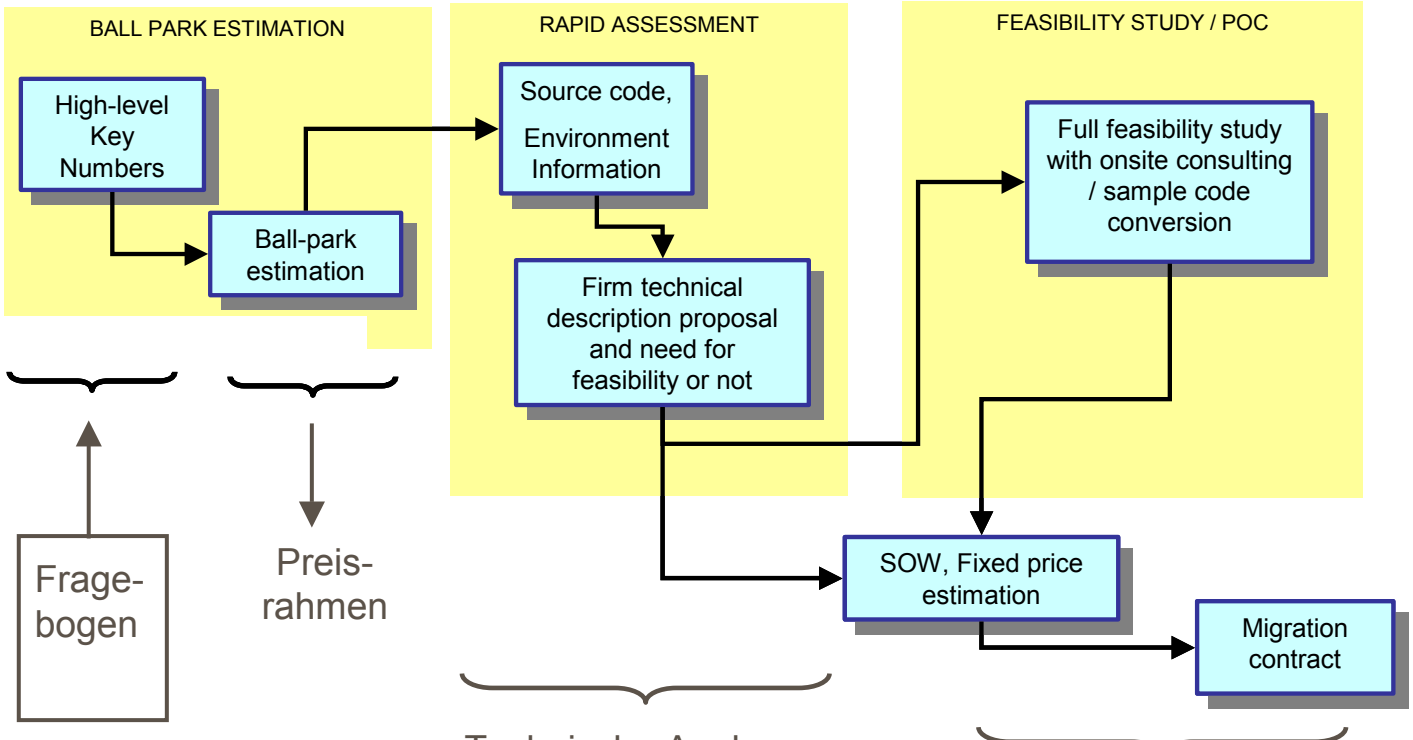
COBOL Solutions

COBOL Analyse, Entwicklung & Deployment

Unsere Kompetenz

- Code Migrationen
  - IMS/DC → CICS
  - Natural → COBOL
  - Mantis → Cobol
  - PL1 → Cobol
- Daten Migrationen
  - IMS/DB → DB2
  - Adabas → DB2
  - Adabas → Oracle
- Plattformwechsel und Downsizing
  - Unisys OS2200 mit Cobol/DMS → z/OS mit Cobol und DB2
  - IBM z/OS/Cobol/“irgendeine DB“→ IBM iSeries/Cobol/DB400
  - IBM VSE/Cobol/“irgendeine DB“→ IBM iSeries/Cobol/DB400

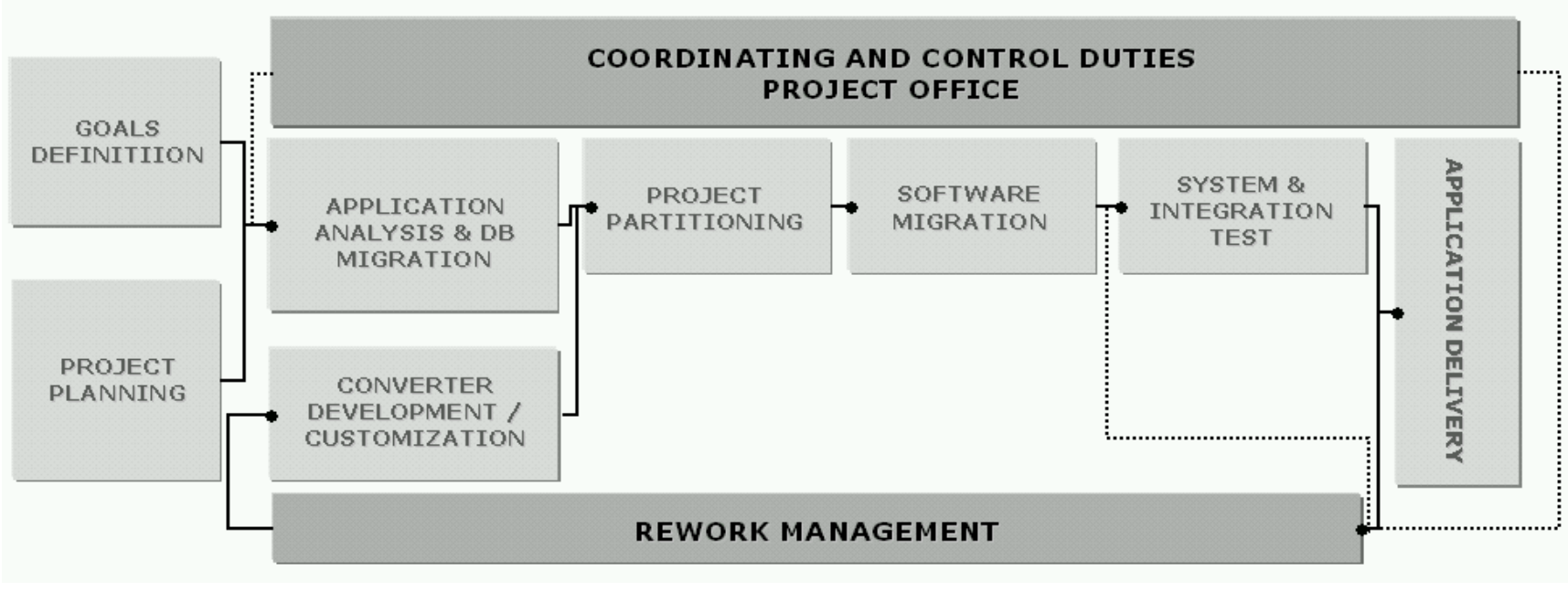
Vorgehensmodell: Übersicht



- Technische Analyse des Source Code
- Beurteilung der Nähe zur Standardmigration
- Gesamtkosten der Migration
- Liste der Migrationsrisiken
- Detaillierter Projektplan

- Durchführung einer Teilmigration
- Lösungskonzept
- Performance-Tests
- Gesamtkosten der Migration
- Liste der Migrationsrisiken
- Detaillierter Projektplan

Methodologie und Migrationsprozess



Statement of Work & Project Management Keep expectations aligned	Converter and runtime customization Tuning performance & automation	Mass migration activities Residual manual work and testing	Test Support Highest automation in tests	Post deployment support Reducing maintenance costs

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MICRO FOCUS

SSP Phase II (Strategic Solution Program)

Migration of ABACUS from UNISYS to z/OS

April 5, 2006

SSP Goals

Renovation of the base system

- Reduction of the operational risks
- shorten time to market
- real time processing and 7x24 availability
- «Client-Facing» Applications along the business processes
- clear interfaces based on industrial standards (component based architecture)

Enabling of new business functionality

- Entrepreneurial flexibility
- focus on the client
- Multi-Channel-Management
- Improvement of Financial und Management Reporting
- Multy entity ability

Replacement of the UNISYS mainframe

- Replacement of the proprietary Unisys-Platform
- Reduction of maintenance costs
- Provision of an efficient developer environment
- Enabling usage of standard SW packages

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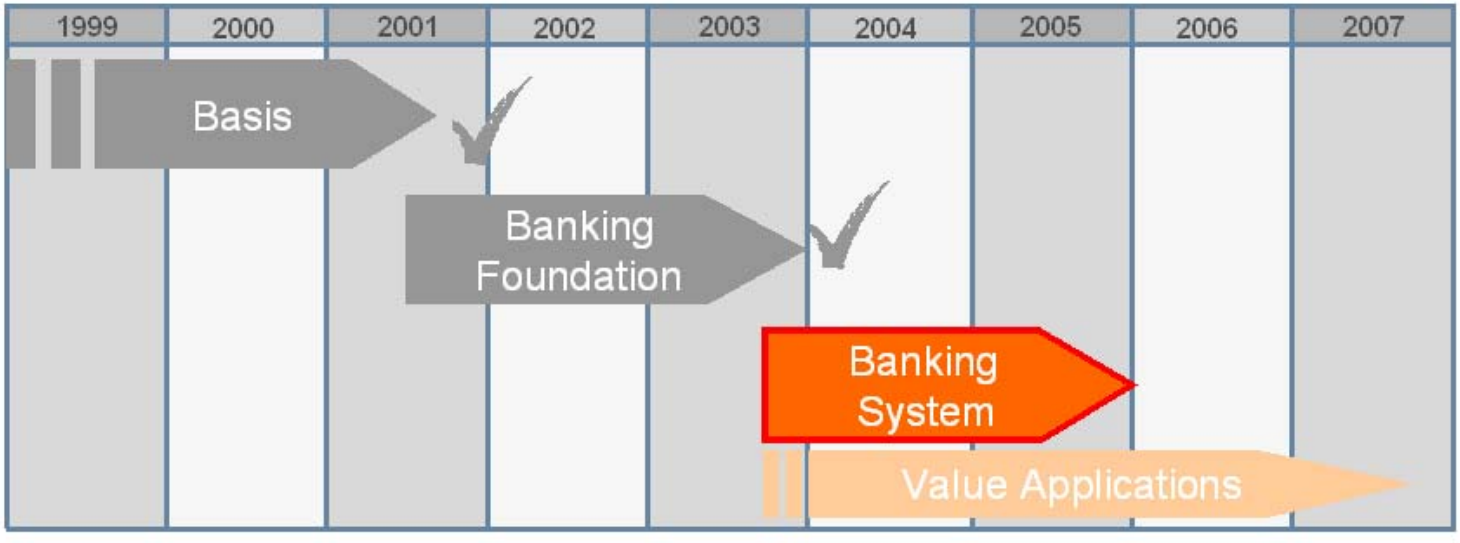
The phases of SSP



Phase I

- **Basis:** Application and technical Architecture, Data Warehouse, Logistic Applications
- **Banking Foundation:** Client Data, Securities and Cash-Accounting, Financial- und Management-Accounting

Phase II

- **Banking System: Migration of Abacus-Applications fromUnisys to z/OS**, Mastering of Client Data, Minimal Compliance with the SSP Architecture
- **Value Applications:** Enhance and enrich the banking foundation with additional business functionality along priorities and benefits of the business

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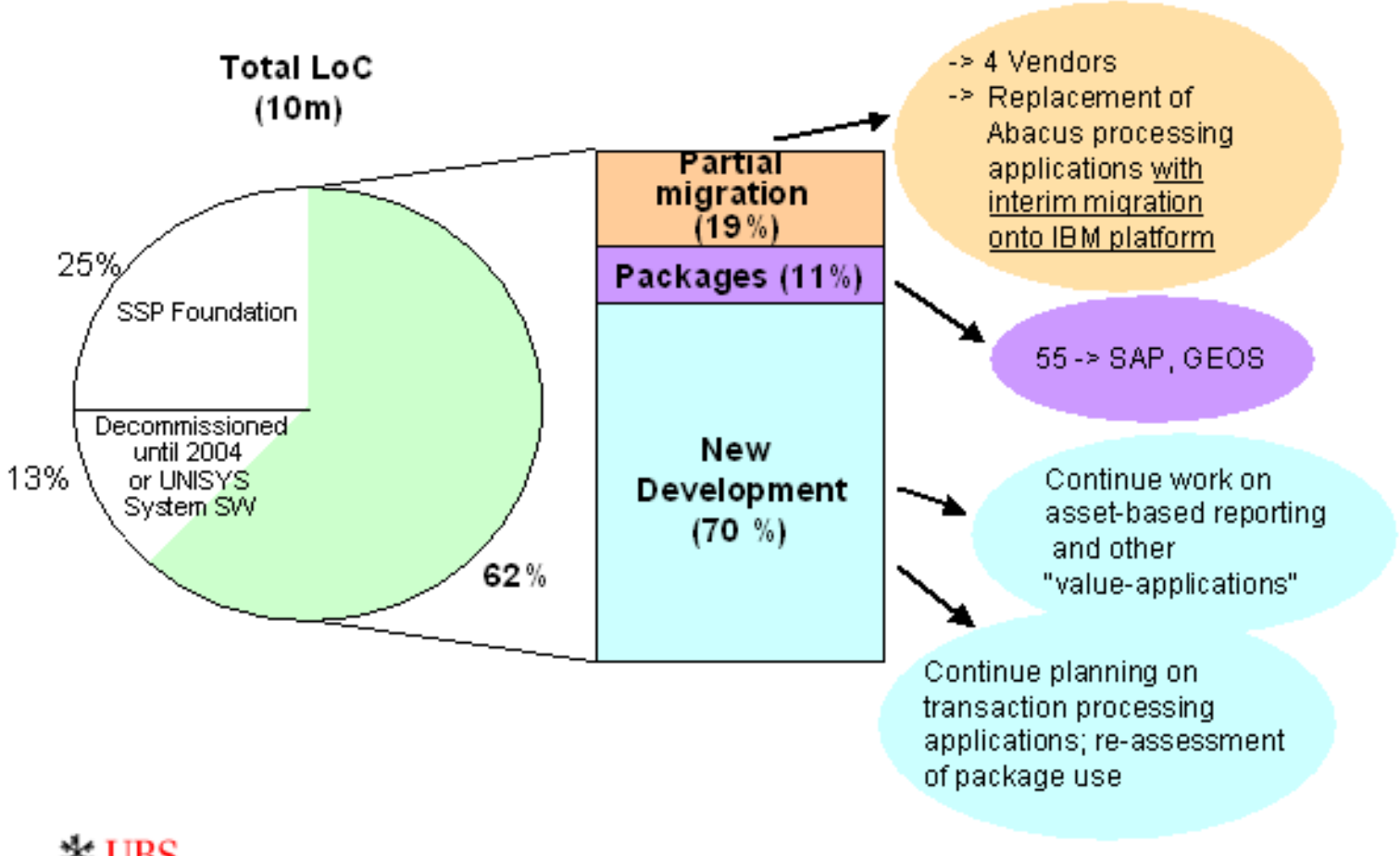
Segmentation of ABACUS program code into options



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Migration ABACUS / Baselines

General Baselines

- Still legacy ABACUS applications (no functional changes)
- Termination of migration by end of 2005 **2004**
- Duration of migration (for all lots) 12 **6** months max.
- Migration start not possible before completion of SSP Foundation
- Existing Service Level Agreements should be held

Technical Baselines

- Migration highly automated
- Target system IBM OS/390 with DB2, CICS, OPC
- No changes on (IBM-) standard software
- No synchronous updates over platforms

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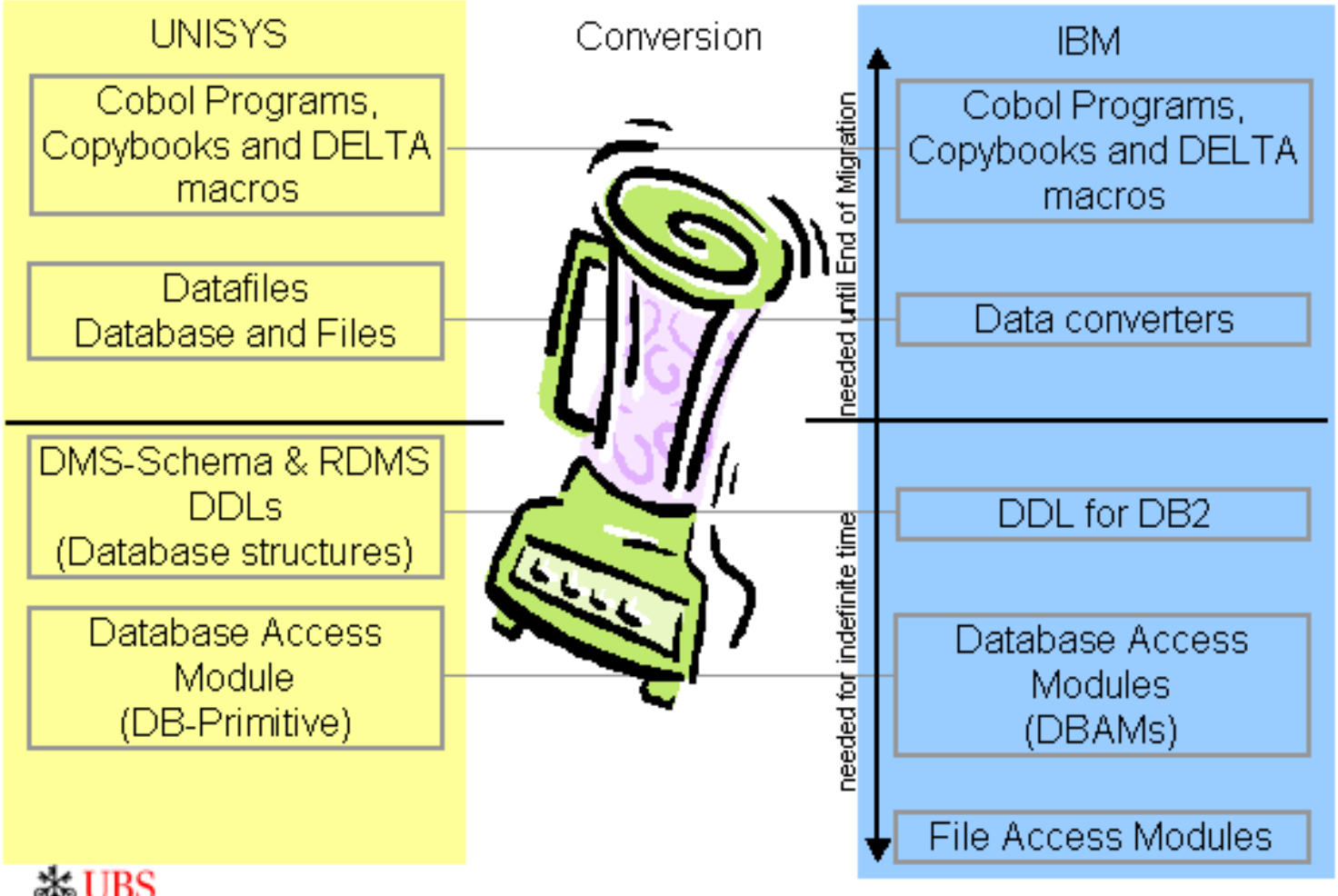
Deliverables by the external partner



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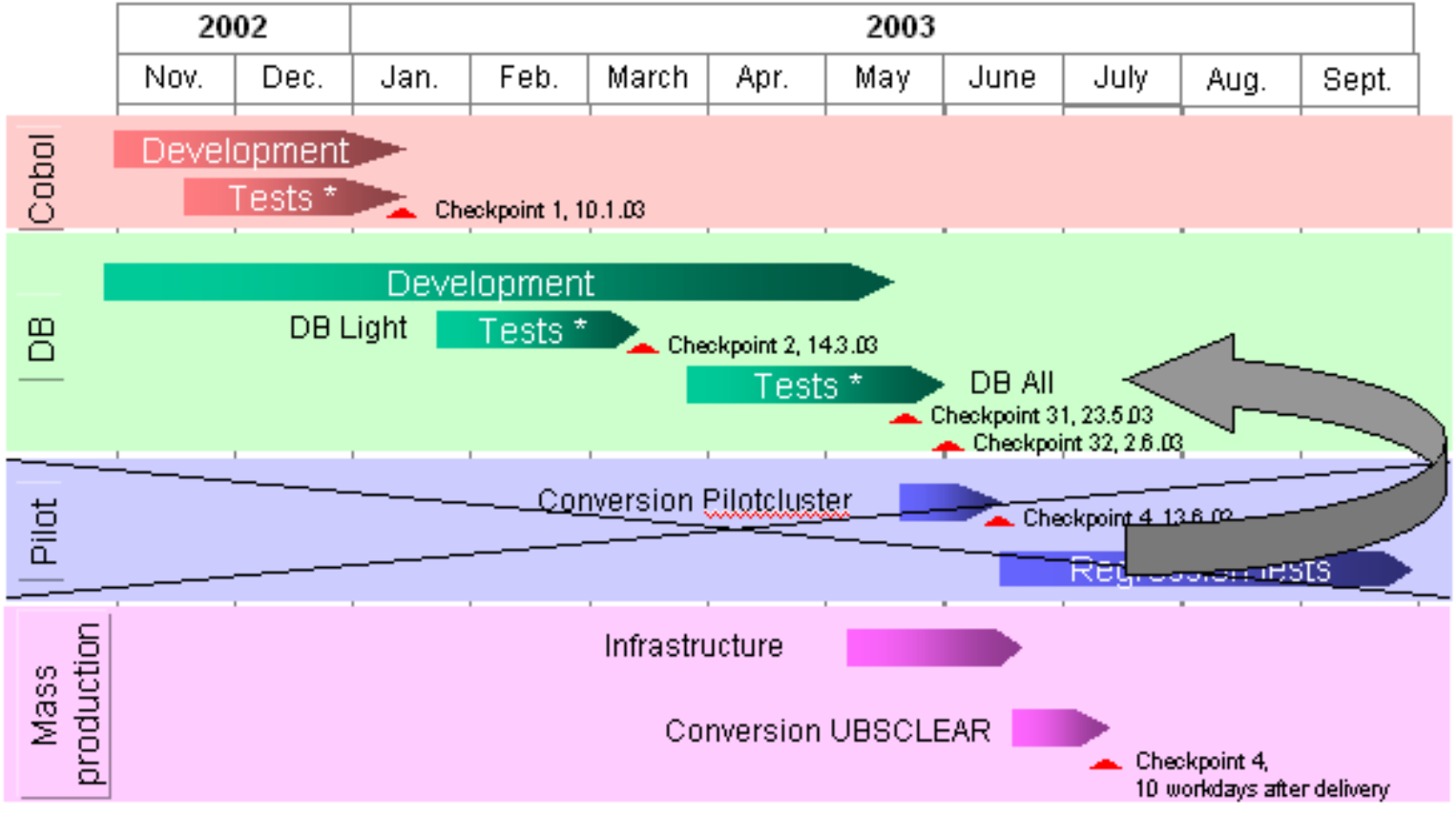
Schedule for the proof of concept, evaluation



* Tests by partners on UBS-Mainframes

Deadline for deliverables by partners

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How to choose the right partner?

The deliverables

- Completeness of the solution (functionality)
- Quality and stability of the functionality of the runtime
- Quality and maintainability of the converted code
- Runtime behaviour of the solution (Performance)
- Degree of automation for the code conversion

The company

- Understanding
- ability to execute and deliver in large scales
- availability and quality of the skills
- project management and management support

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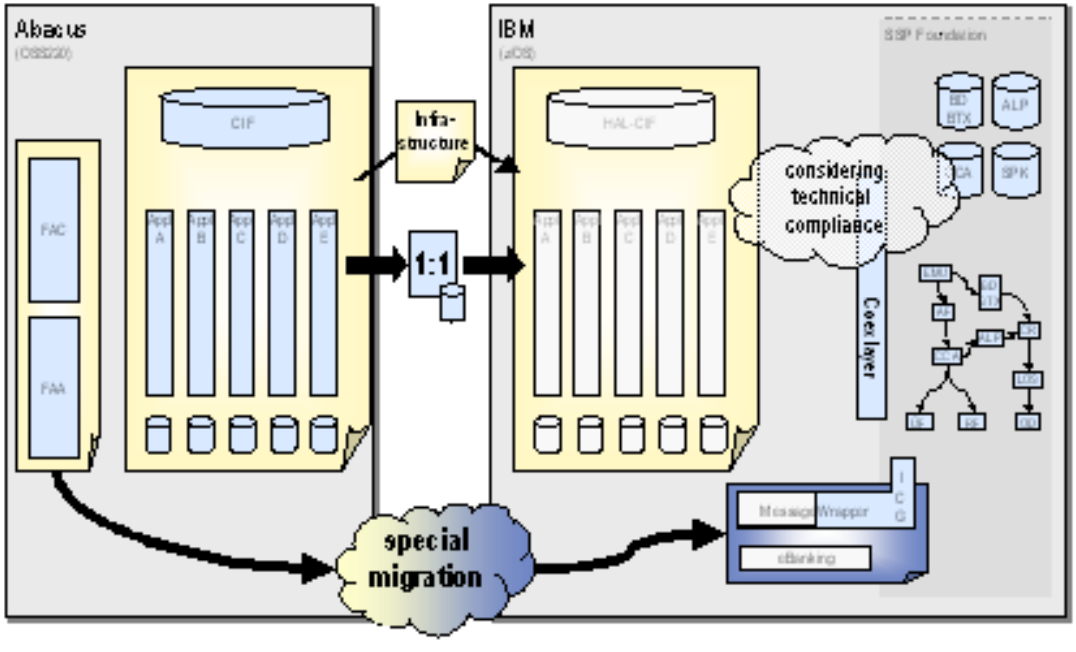
The migration concept



- Intention: 1:1 migration from Unisys (Abacus) to IBM (zAbacus) with single source approach
- Special migration of some applications
- Build up the entire infrastructure and middleware

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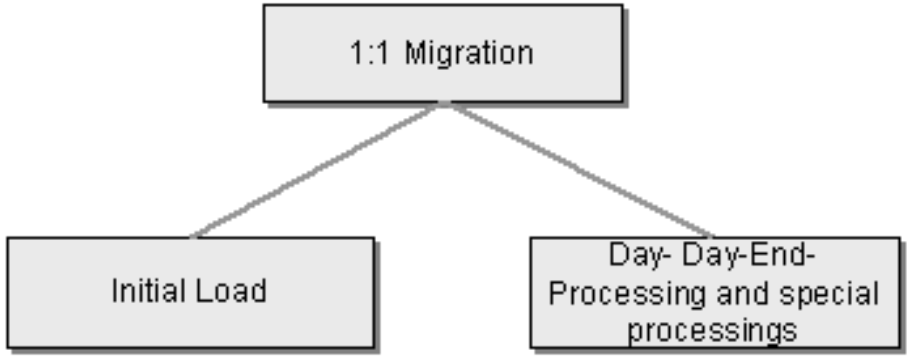
Figures of the Migration



Konversion:	Volumes
Programs (Online / Batch)	(2'043 / 5'013)
LOCs (Online / Batch)	(2'271'067 / 4'173'416)
Databases (DB2 objects)	(3'000)
Files	(8-10'000)
Batch Jobs	
Jobs / Nets*	(217'000 / 29'600)
Inkl. (Initial Load, Day-/Day End-Processing and special processings)	

* Figures out of the Day End Processing of 03.07.2003

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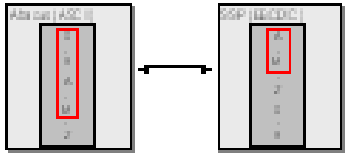
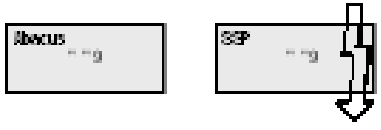
These were some of the challenges

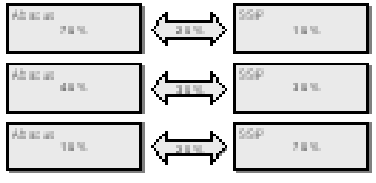
Challenge 1:
From one text file code (ASCII) to the proprietary EBCDIC code.



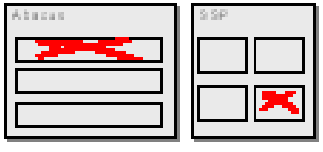
Challenge 2:
Blanks are not accepted in numerical datatypes on the new platform.



Challenge 3:
During the migration of the VE's keep the File/Data transfer between the Platforms on a low level.

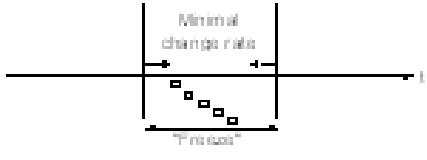


Challenge 4:
Minimize downtimes during week-end migrations.

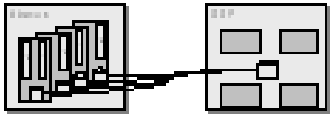


Challenge 5:
Migrate all VE's to the new platform within a limited time frame.

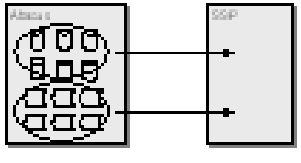
Challenge 6:
Keep the code change rate between the last EFP (before code freeze) and the end of migration minimal.



Challenge 7:
Keep technical compliance in mind, when migrating from many different hierarchical DBs to one big relational DB.



Challenge 8:
Transfer of big data volumes within one migration weekend.



Further Challenges:

- Divisions by zero
- Exponential
- Key people
- Money
- Parallel tasks
- etc.

Day end processing after the migration

- Closely monitored
- low rate of problems
- immediate problem solving
- Online processing on the first day
  - 758'000 Transactions with mean response time Ø 0.22 sec and average CPU Ø 50 msec
  - Application error rate 1.4 ‰ (incl. User errors)
- Batch processing on the first day
  - 35'000 Batch programs
  - Finished on time

==> all service level agreements were met

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