Legacy Transformation: Leveraging Information Assets to Deliver Business Value

William M. Ulrich
Tactical Strategy Group. Inc.
www.systemtransformation.com

CIO Legacy Survey*

How useful are your company's legacy systems in helping you reach your strategic goals?

- Very useful / somewhat useful 63.7%
- Somewhat limiting / very limiting 36.3%

→ Legacy systems are still important

* CIO Insight – December 2002

CIO Legacy Survey*

What are the major reasons for keeping the legacy systems your company is currently planning to retain?

- Still able to support business processes 54.4%
- Still reliable 49.7
- Staff available to support them 44.3
- Still more cost effective than alternatives 41.6
- We do not have the budget to make any changes 36.9
- Still able to support strategic goals 36.9

Still relevant and reliable

* CIO Insight – December 2002

CIO Legacy Survey

If you are currently migrating or planning to migrate off any of your current legacy systems in the next year, what are the main reasons?

- Meet new strategic goals 65.2%
- Legacy systems can't support business processes 59.9
- Legacy systems can't support current strategic goals 56.1
- New systems would be more cost effective 48.5
- Legacy systems provide poor interoperability 41.7

→ Migration / transformation plans

* CIO Insight – December 2002

Legacy Applications vs. Emerging Technologies

- Legacy architectures run in sharp contrast to modern IT disciplines.
- The challenge is how to migrate to emerging architectures while meeting critical business requirements.

Transformation: Bridges Gap Between Legacy & Emerging Architectures

Business-Driven Requirements

Legacy Architecture Transformation

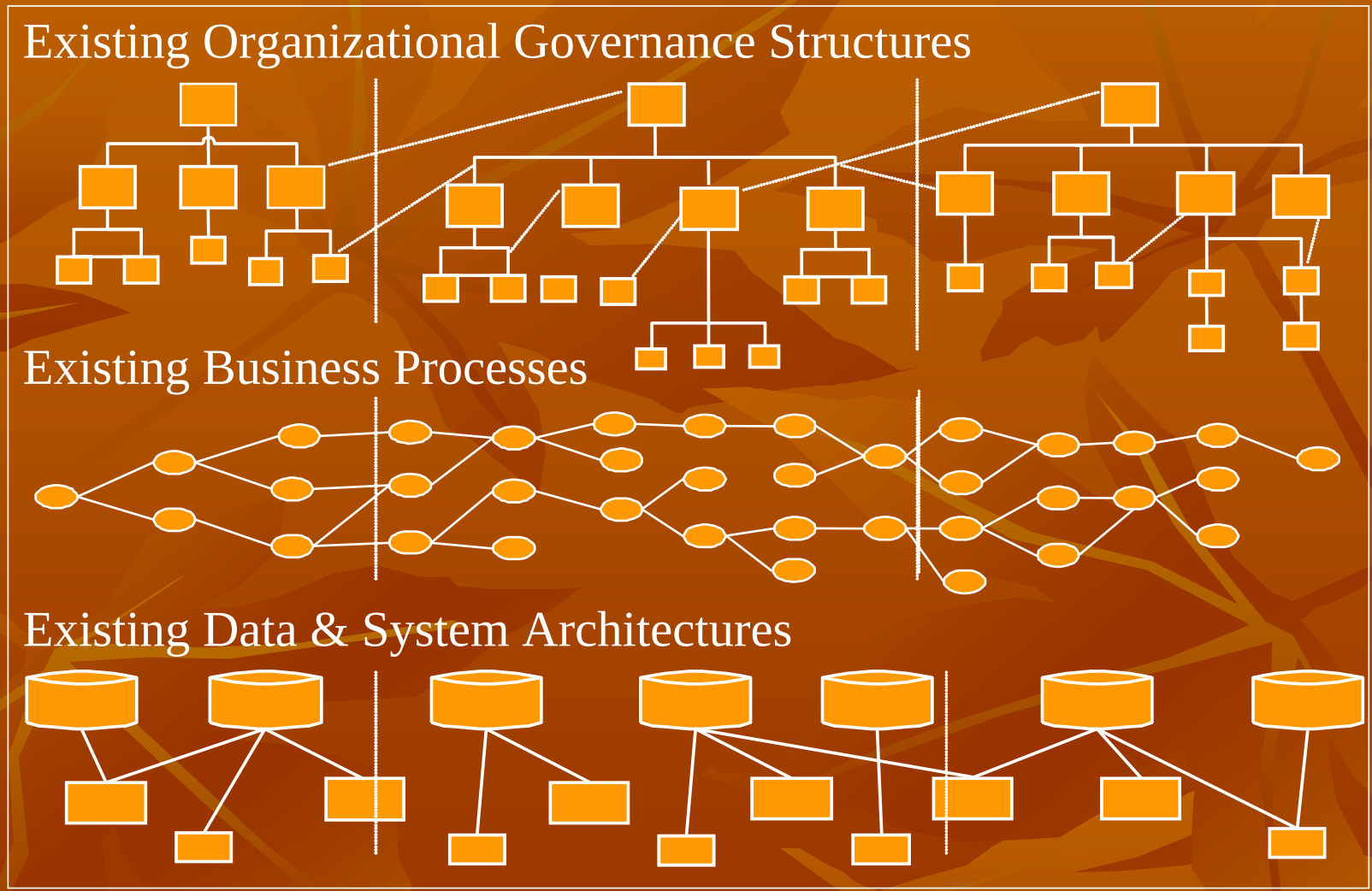
Legacy Architectures

Strategic Architectures

Legacy Applications & Architectures

- Numerous languages and platforms
- 200 billion lines of Cobol (60% of total)
- Haphazard design and stovepipe architectures
- Segregated functionality and data structures
- Layers of middleware and data warehouses
- Web-based interfaces

Poorly Integrated Information Architectures



Business processes, applications and data mirror stovepipe information governance structures.

Legacy Architectures Impede Ability to Deliver Business Value

- 85% of IT projects: late or never delivered*
- Only 9% of IS projects come in on time or within budget*
- ERP projects: years to implement, canceled 35% of the time & rarely fully deployed*
- $16.5 billion is spent annually on systems that users never see (Information Week)
- Management has been duped into believing “quick & easy” solutions can solve complex IT challenges

* Standish Group International

Non-Invasive Integration vs. Legacy Transformation

- Integration: Non-invasion approach that connects processes, data and applications
- Transformation: Invasive solutions to address legacy architecture challenges
- These disciplines are interdependent and interrelated
- Transformation is an augmentation strategy

Legacy Transformation is an Augmentation Strategy that includes:

- Understanding application and data architecture and functionality
- Making legacy systems more reliable and adaptable
- Extracting and rationalizing data definitions, data and business rules
- Redesigning and reusing legacy rules and data within the context of a strategic architecture

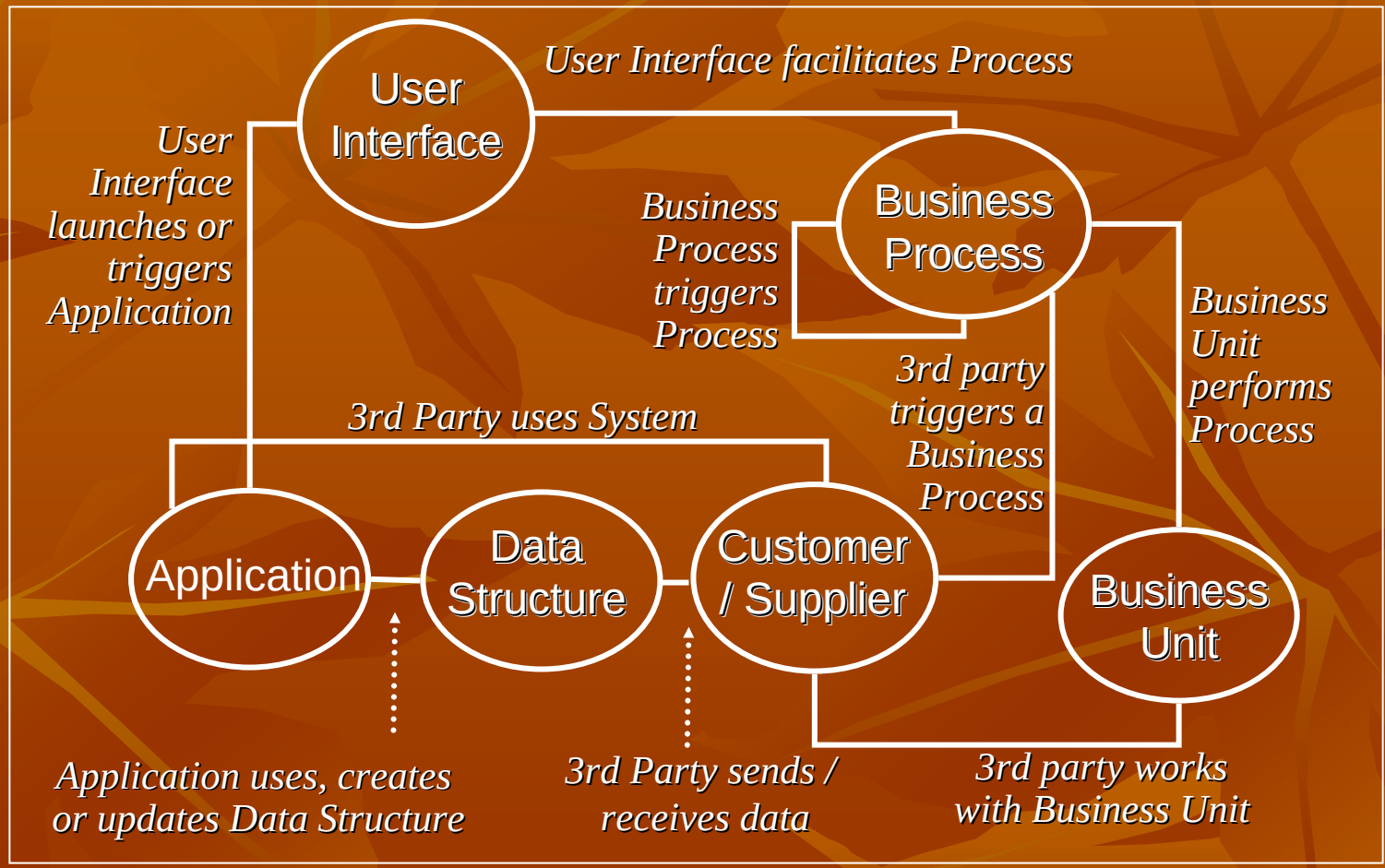
Transformation Infrastructure Requirements

- Recognition of legacy value
- Process for assessing legacy architectures and capturing, reusing and migrating legacy components
- Process for analyzing, designing, building and deploying target architectures
- Software that facilitates and integrates transformation and development processes

Shift from “From Scratch” Development Philosophy to Phased Reuse

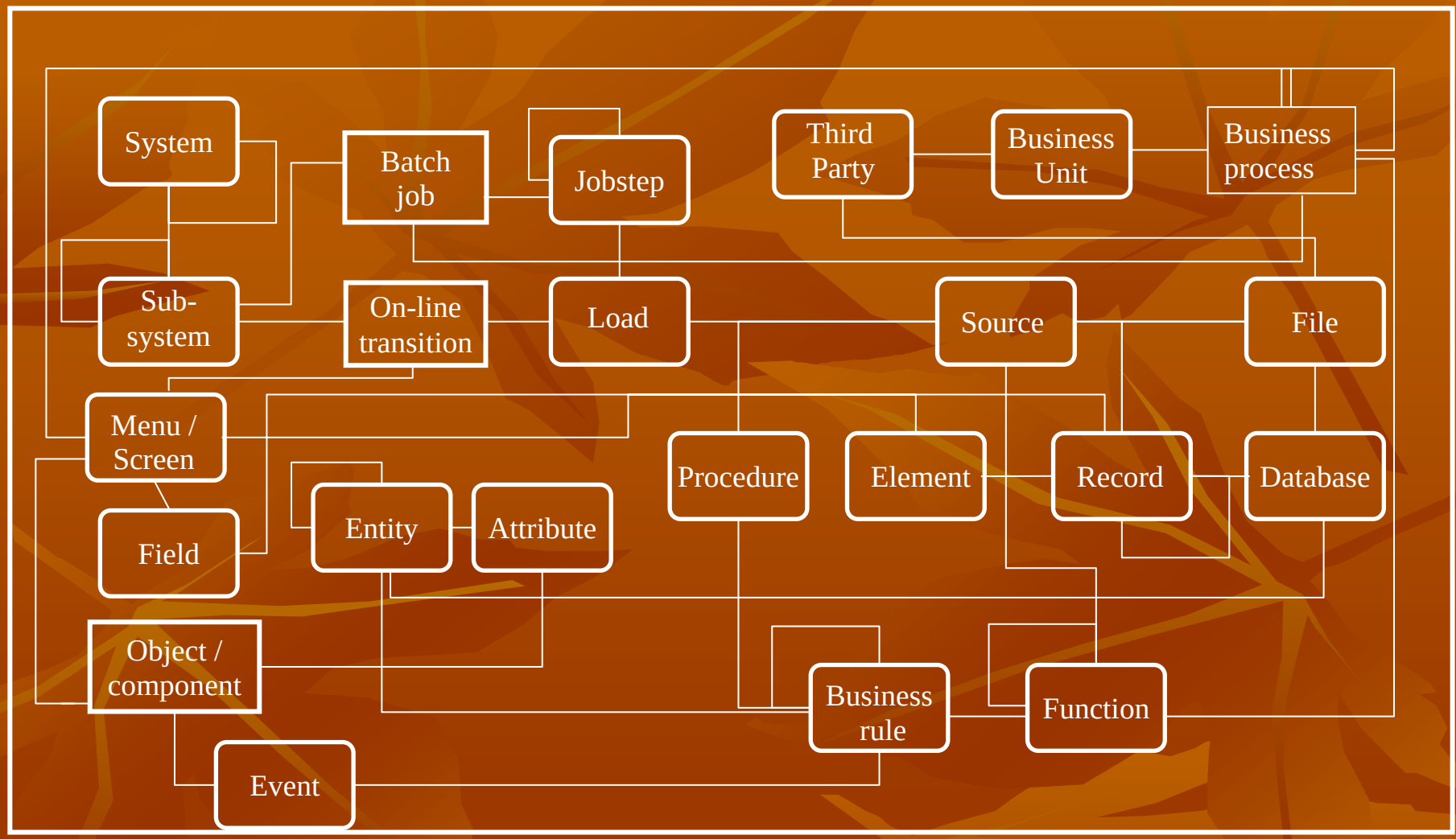
- Replace “throwaway” philosophy with “reuse” philosophy
- Shift from an “all or nothing / go for broke” approach to a phased deployment approach
- Seek lower risks, higher returns and faster delivery through phased delivery strategy

Cross-Functional Application Warehouse



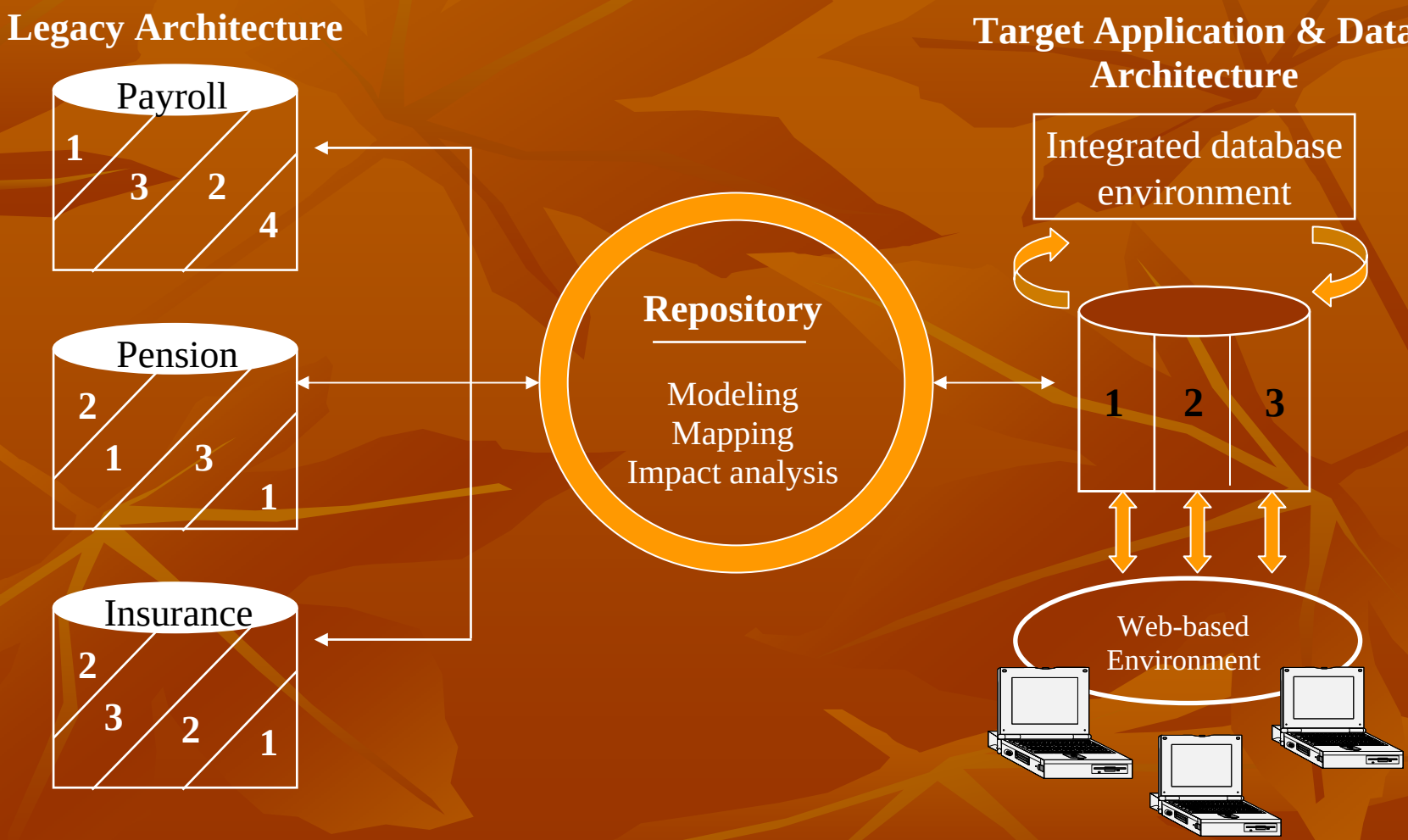
Enterprise information architecture can be captured in transformation repository to support various projects.

Project-Level Application Warehouse

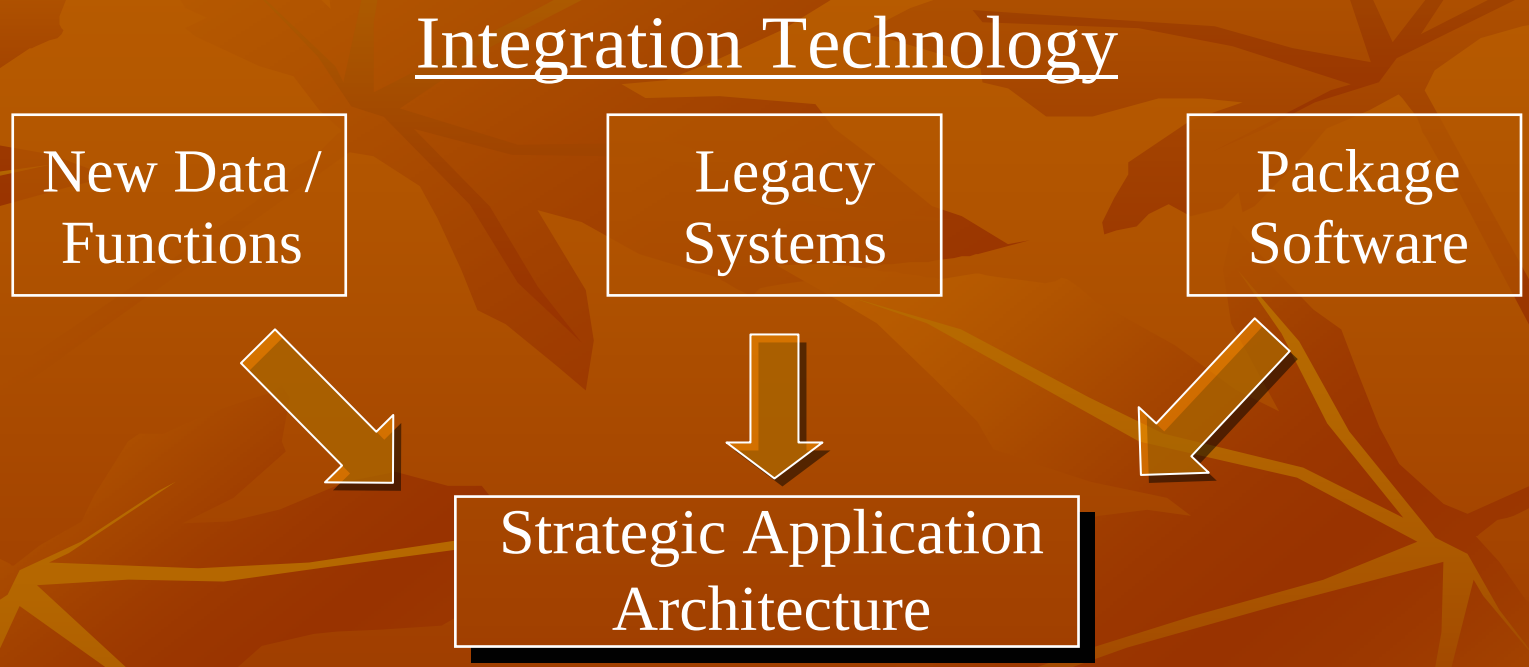


Project-level repository facilitates tracking of business data and rules back to physical system components and target requirements.

Sample Projects' Use of Application Warehouse



Application Transformation Planning



- What mix of legacy, new and package components will define an organization's application systems under the target architecture?
- How will organizations partition and transition legacy systems to achieve strategic targets?

Software Option Strategy Matrix

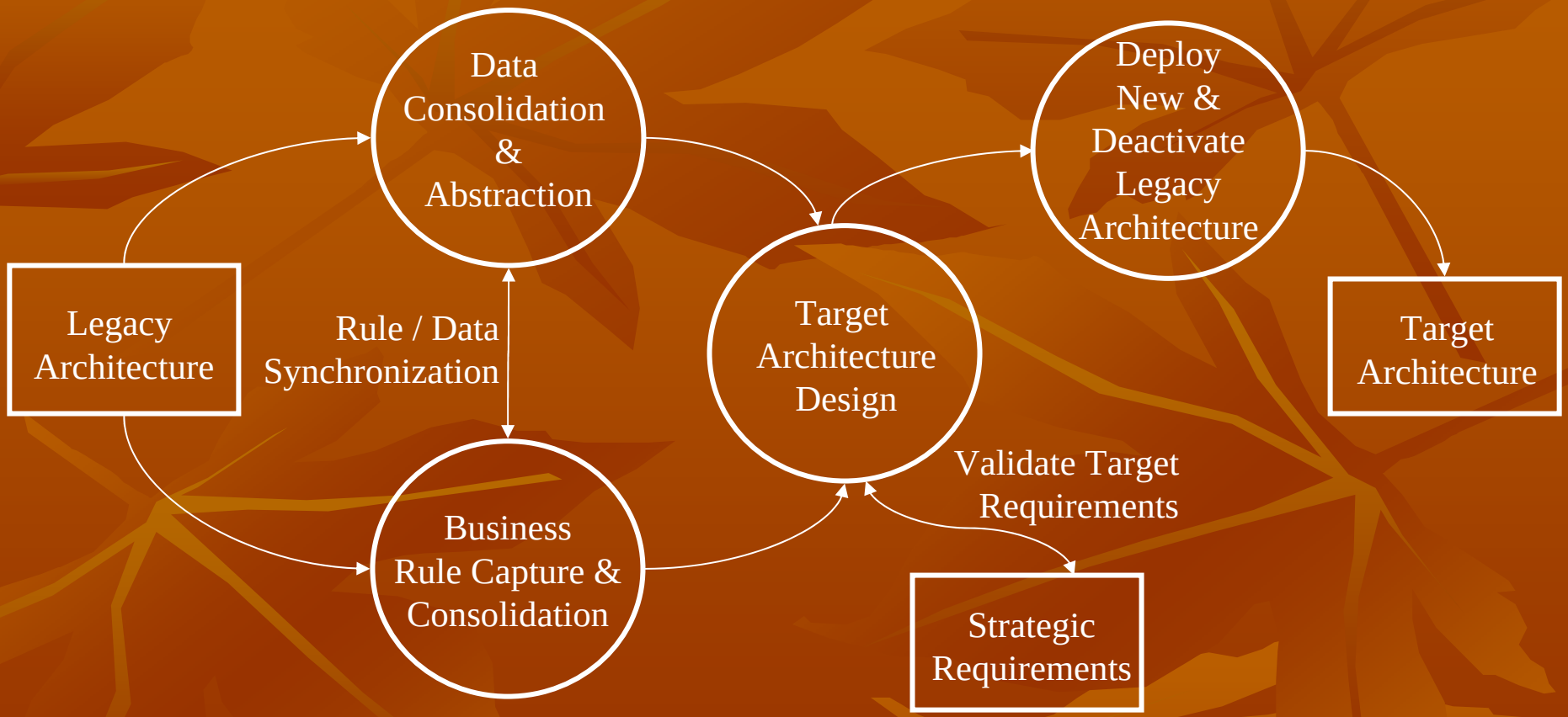
FUNCTIONAL CONDITION	*ORGANIZATIONAL IMPACT* LOW	HIGH	LOW	HIGH
GOOD	MAINTAIN / MIGRATE / INTEGRATE	UPGRADE / CONSOLIDATE	MAINTAIN	MAINTAIN
POOR	PHASE OUT	REPLACE	INTEGRATE OR ENHANCE	ENHANCE / CONSOLIDATE

POOR **GOOD**

TECHNICAL QUALITY

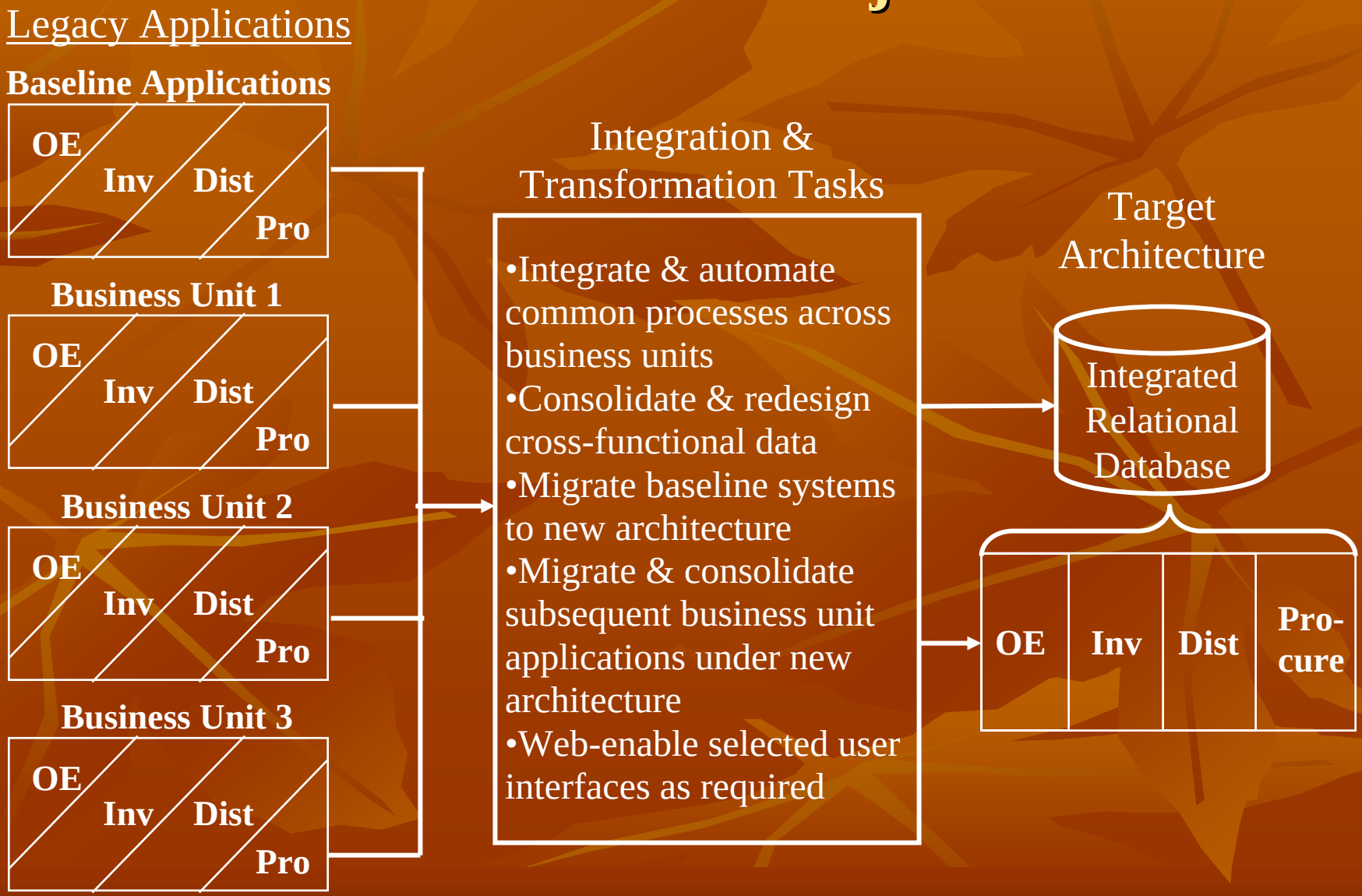
High impact software components should be enhanced, consolidated or maintained based on business requirements.

Generalized Architecture Transformation Model

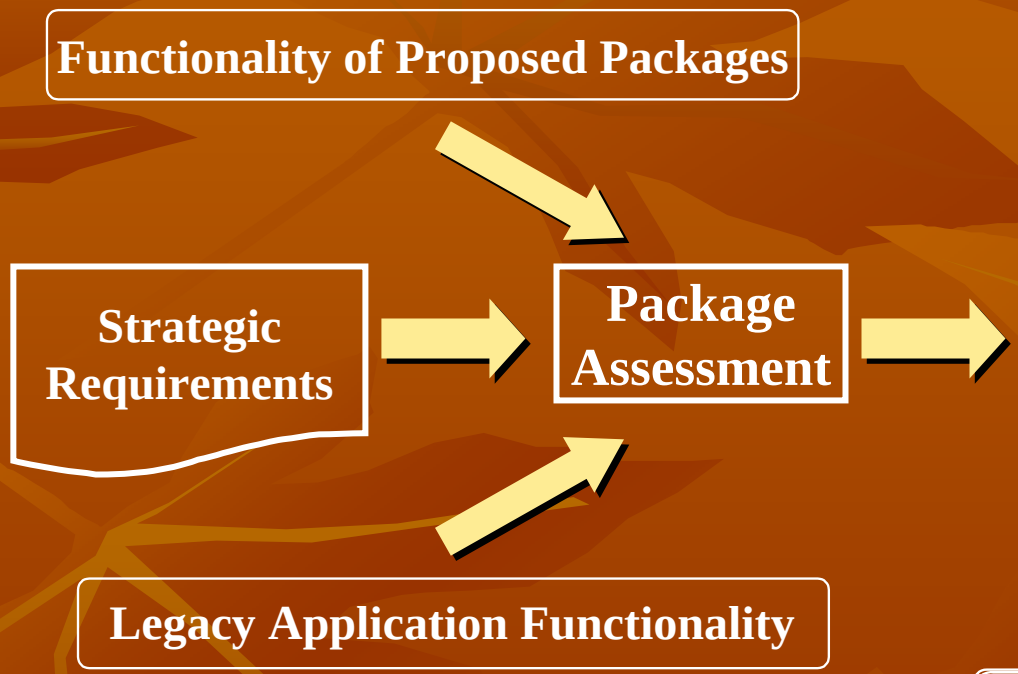


Transformation options include data and business rule capture, consolidation, redesign, validation and redeployment.

Legacy Transformation in an Application Consolidation Project



Legacy Analysis Role in ERP Selection

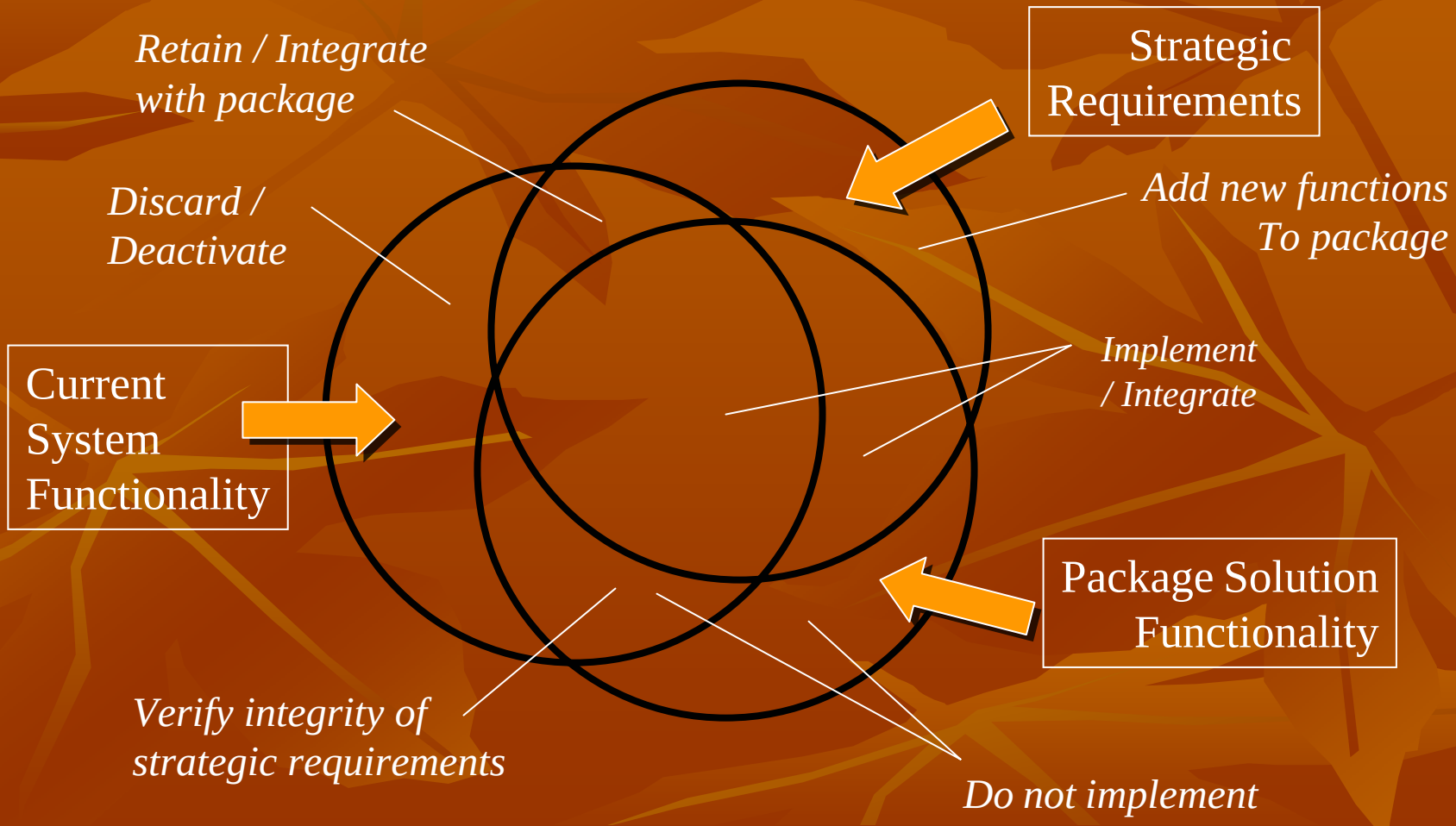


Bus Function \ Source	REQ	PK1	PK2	PK3	LEG
Func a	X	X	X	X	X
Func b	X	X			X
Func c	X	X	X	X	--
Func d	X	X		X	X
Func e	X	X			X
Func f	X			X	X
Func g	X	X	X	X	X
.....	X	X		X	X
.....	X	X	X	X	--

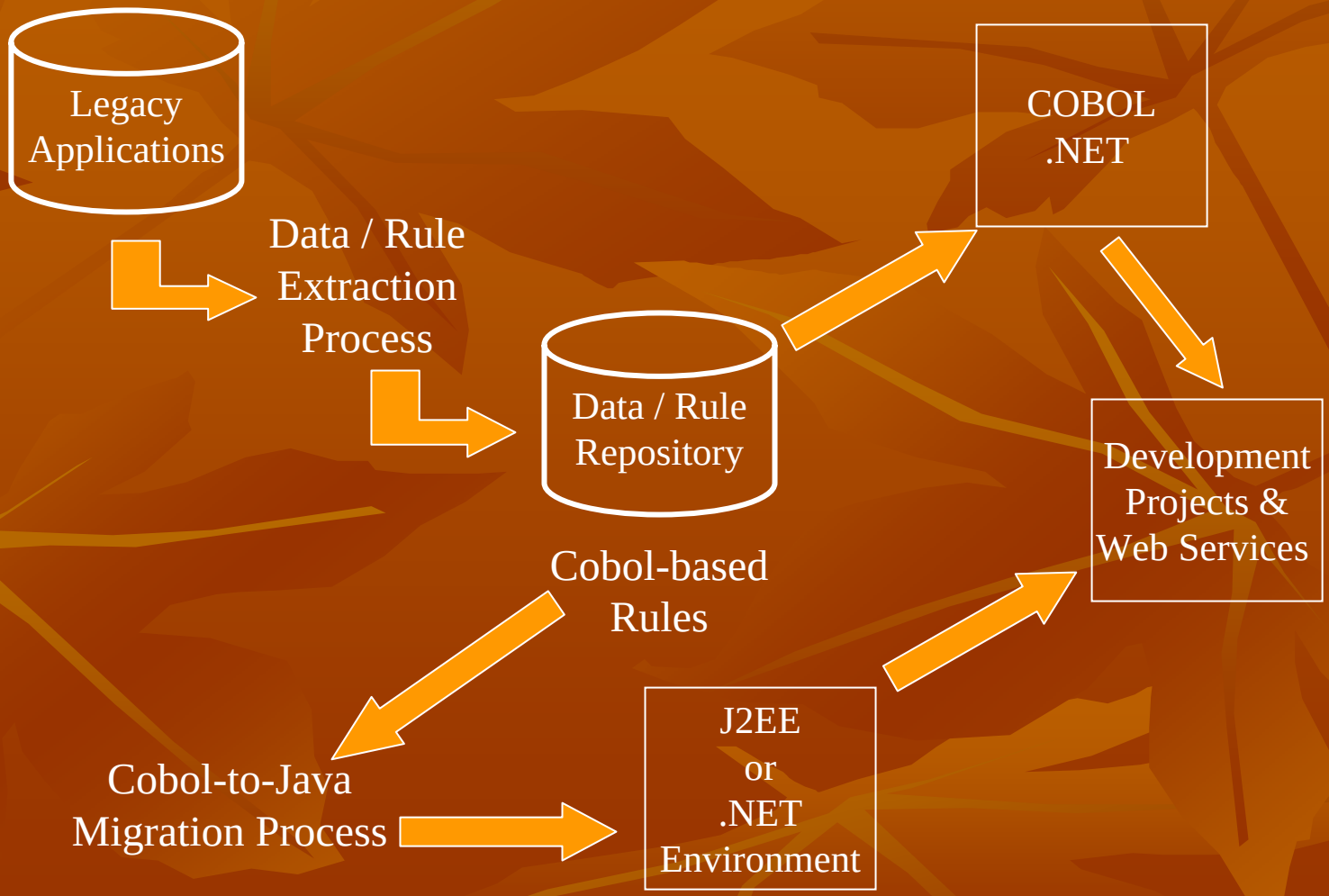
Package Selection Results & Plan

Multi-package assessment defines how packages map to requirements (REQ) and to legacy (LEG) functions.

Legacy Transformations' Role in ERP Deployment



Legacy Transformations' Role in a Componentization Extraction Strategy



In Summary
Legacy Transformation:

- Retains and reuses valuable business knowledge from legacy applications
- Augments an enterprise's ability to deliver strategic, time-critical projects
- Reduces risks and increases odds of success for new application initiatives
- Achieves strategic goals more quickly, more reliability and at a reduced cost