

ISM

IT Solutions Management for Human Services

an affiliate of the American Public Human Services Association



Signposts of Success: Planning for an Orderly Legacy Systems Transition

Edward Hamlin
Director, Human Service Product Strategy

Claudia Langguth
Senior Vice President, Human Services

Lagan Technologies, Inc.

Connecting Governments and People

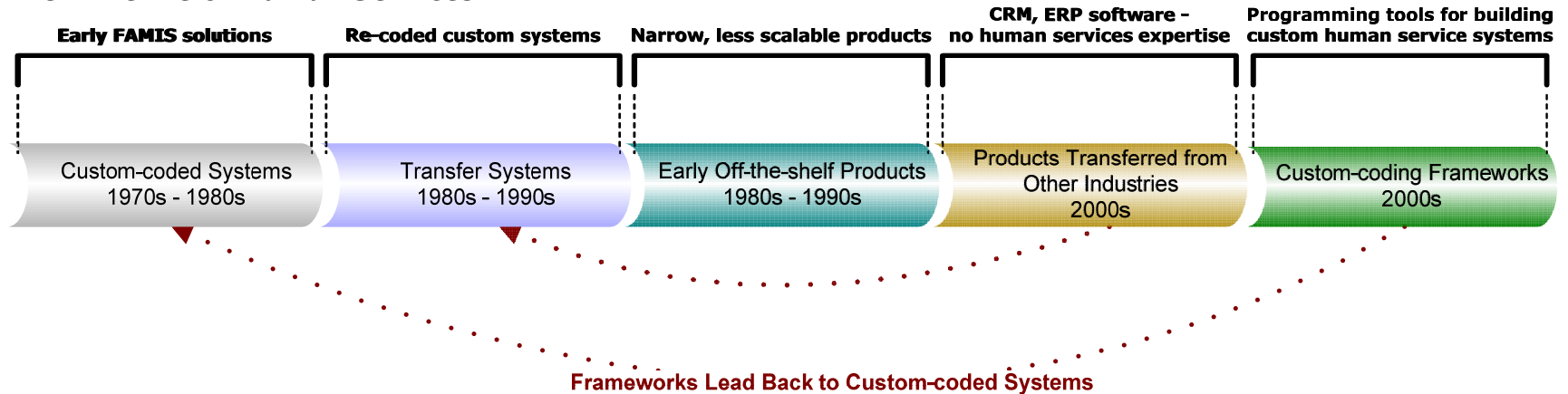
The Legacy is the Challenge

- The IT portfolio of US human service agencies includes some of the oldest software applications found in any sector
- Nearly all layers of the solution stack are fragile: obsolete databases, dead programming languages, inflexible interfaces, green screens
- Most legacy systems are built on closed architectures and carry extremely high maintenance costs
- Most systems are designed to support financial operations, not service delivery – leading to a proliferation of unsustainable stopgap “solutions” addressing delivery needs

How Did We Get Here?

Those who cannot remember the past are condemned to repeat it.
- George Santayana

The Timeline of Human Services IT



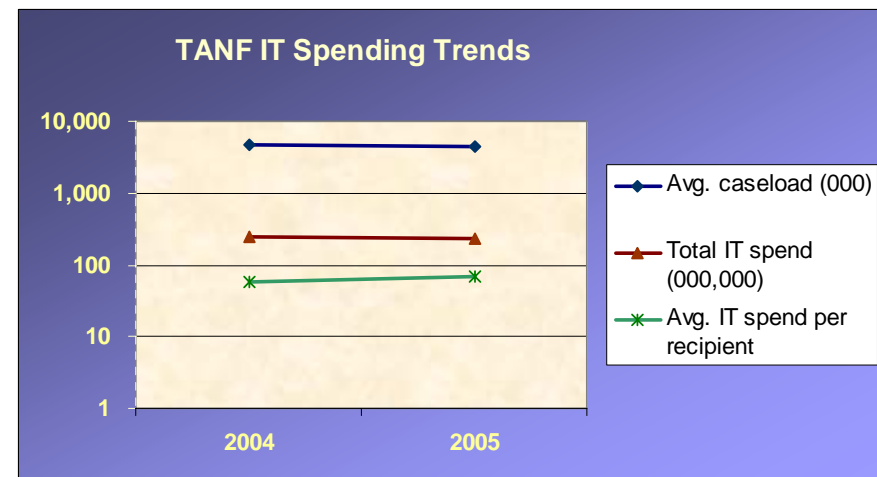
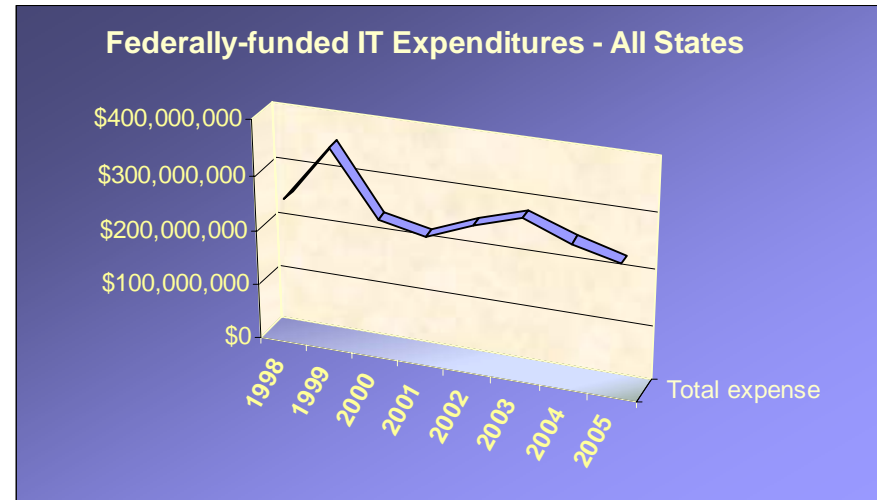
Many approaches to human services IT automation have been tried over the years. None so far has provided a reliable path toward the successful automation of complex agencies.

Frameworks – the latest fashion - only lead back to **custom solutions** that are expensive to build, hard to maintain, and highly vendor-controlled.

Human Services IT: The Funding Realities

The federal share of IT spending is generally declining across the states, and has declined massively since peaking in the late 1990s...

...but caseloads are declining even faster. For TANF, federal IT funding support per recipient climbed from \$56 to \$67 between 2004 and 2005 (last published data).



The High Cost of Rip-and-Replace

- Texas TIERS was originally budgeted at \$88M but has now surpassed \$250M and is running more than three years behind schedule
- Wisconsin's enABLES project was intended to replace the state's legacy unemployment insurance system with a new custom solution built with a software framework, for a projected cost of \$24M over three years; the project was terminated in February 2007 with only two of six phases delivered and a revised budget forecast of \$41.2M
- In 1992, Michigan let a \$60M contract to replace the state's FAMIS with ASSIST; after only two years the project was nearly 100% over budget and ASSIST was not deemed fully operational until 1998.

A Look Over the Fence

How are other sectors dealing with the legacy replacement challenge?

A broad survey of 150 CIOs in multiple industries finds that:

- 70% of firms are looking to modernize their IT portfolios in 2007
- Only 13% plan to take the “rip and replace” approach
- 34% plan to use Service-Oriented Architecture (SOA) to incrementally update their systems

SoftwareAG survey, 2006

Industry Best Practices for Legacy System Replacement

- Undertake orderly transitions toward scalable, open, standards-based COTS products – **avoid custom builds**
- Phase in replacement solutions gradually rather than imposing them through a massive “rip and replace” effort
- Focus early on the challenge of migrating interfaces – have a business plan, a technical vision and a toolkit of proven technologies
- Put software vendors, not agency IT departments or consultants, on the hook for keeping systems up to date as underlying technologies change
- Select products that enable policy and program staff to directly update expert content such as eligibility rules, workflows, policy documents and analytic reports

Controlling Project Risk and Ensuring Success

- Experience shows that replacing large systems is one of the highest-risk efforts a CIO will ever undertake
- Risk can be mitigated by leveraging four key assets:
 - ✓ A commitment to incremental rather than sudden change, and commercial solutions explicitly designed to support it
 - ✓ Deep program expertise held by experienced staff and the knowledge-management tools to harness it
 - ✓ Emerging human services data interchange standards working in tandem with robust interface technologies
 - ✓ A discipline of measuring results often and quantitatively

Success Strategy #1

- ✓ Commit to incremental change and choose commercial solutions explicitly designed to support it.

Industry best practices encourage staged replacement of legacy systems, but not all commercial solutions are designed to support this.

A key consideration is whether the solution is able to share data flexibly and openly with other systems. Choosing commercial solutions that *assume* a mixed systems environment allows you to tackle achievable replacement projects, measure their success, and make mid-course corrections if needed – all at a manageable risk and cost.

A fundamental procurement standard:

Make sure your solution is based on an *extensible object data model* so that it can capture new types of information as your needs evolve.

Incremental Improvement: The LA County Experience



In 2006, the LA County Department of Public Social Services went live with its first **participant eligibility call center**, the first of several planned “virtual offices.” The center’s 70+ representatives handle in excess of 1,000 calls a day, while also performing other case related activities. Representatives were drawn from the district offices, making the rollout labor cost-neutral.



Lagan Human Services™ tracks all incoming calls, interfaces with the legacy LA Leader system to obtain participant information in real time, and manages triage of calls to the district back office when appropriate.

There is a potential for over 500 call center agents and 8,000 caseworkers using the system once it is fully deployed to all planned district offices.

Rapid Results

LA County DPSS deployed the Lagan solution quickly and on budget, generating immediate return on investment at low overall project risk.

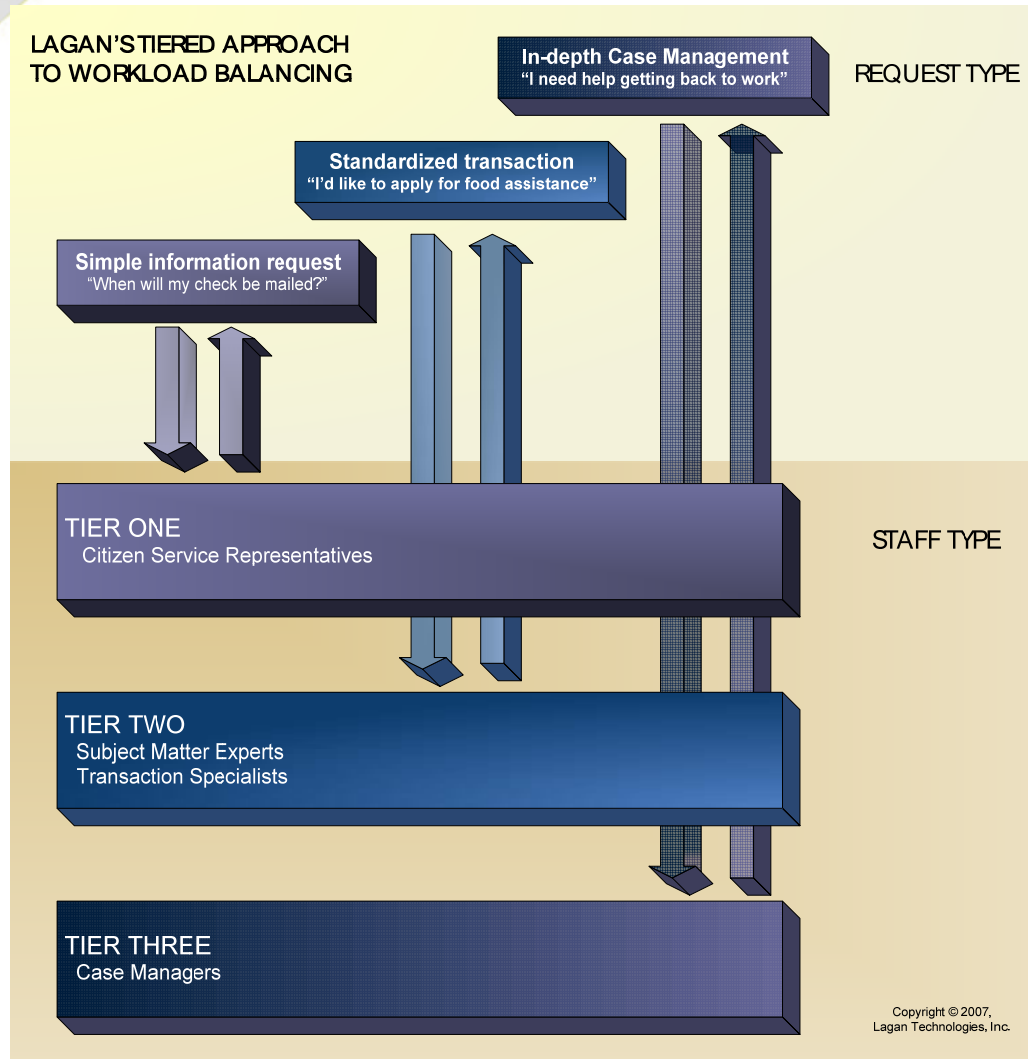
Early measures of success:

- ✓ Time between contract signing and go-live: **6 months**
- ✓ Budget compliance: **On budget**
- ✓ Customer service improvement: **Calls are answered immediately, reducing the call abandonment rate for the Department, and early participant satisfaction with the Customer Service Center is very high.**

“Lagan’s adaptable software greatly enhances customer service to participants of the San Gabriel Valley District Office...The system allows us to track and manage all calls, and route them to the case-carrying worker to ensure action is taken, thereby improving communication with our participants.”

LA County DPSS Manager Involved in The Project

Improving Services by Working Smarter



Measurable, dramatic improvements in service delivery can be seen when the client contact process is streamlined with Lagan's flexible case management software.

By rebalancing work through smart business rules and workflows, load is taken off skilled staff and straining legacy systems.

Success Strategy #2: Empower Your Agency's Experts

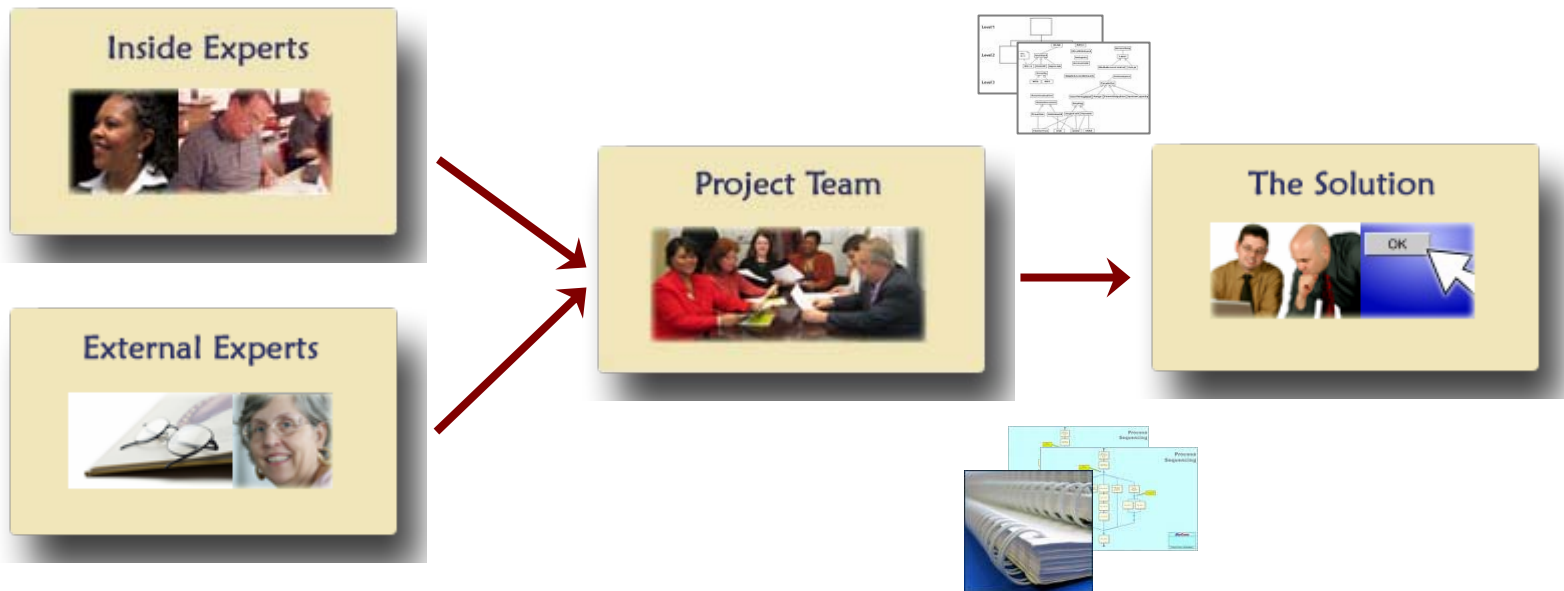
- ✓ Harness the deep program expertise held by experienced staff by making **knowledge management** a central project priority.

For a legacy replacement project to succeed, it must fully mobilize knowledge resources within the agency.

The new software chosen should recognize the centrality of knowledge management and should be fully *knowledge-enabled*.

How to Create a Replacement System: The Old Thinking

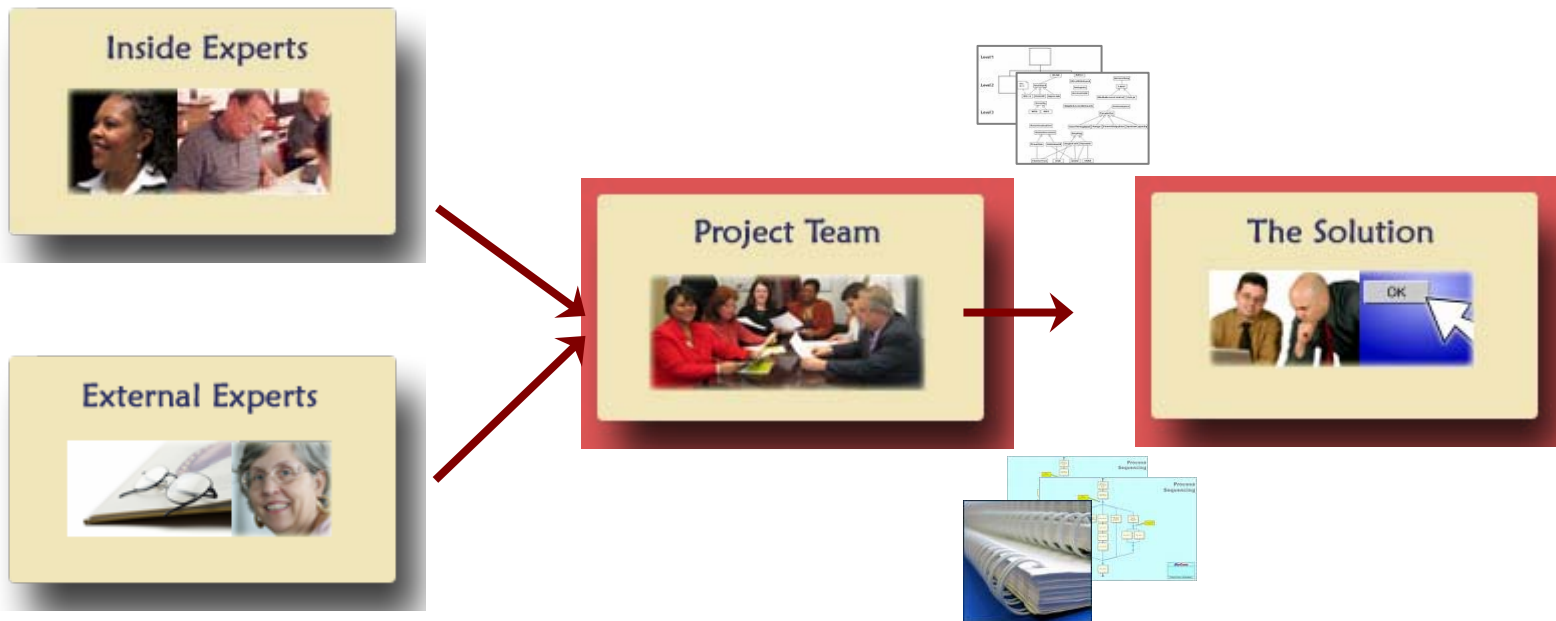
The old way of implementing a systems replacement is to engage in a linear process of defining requirements which become the blueprint for building a custom system.



Knowledge Transfer >>>

The Old Approach: What's Wrong

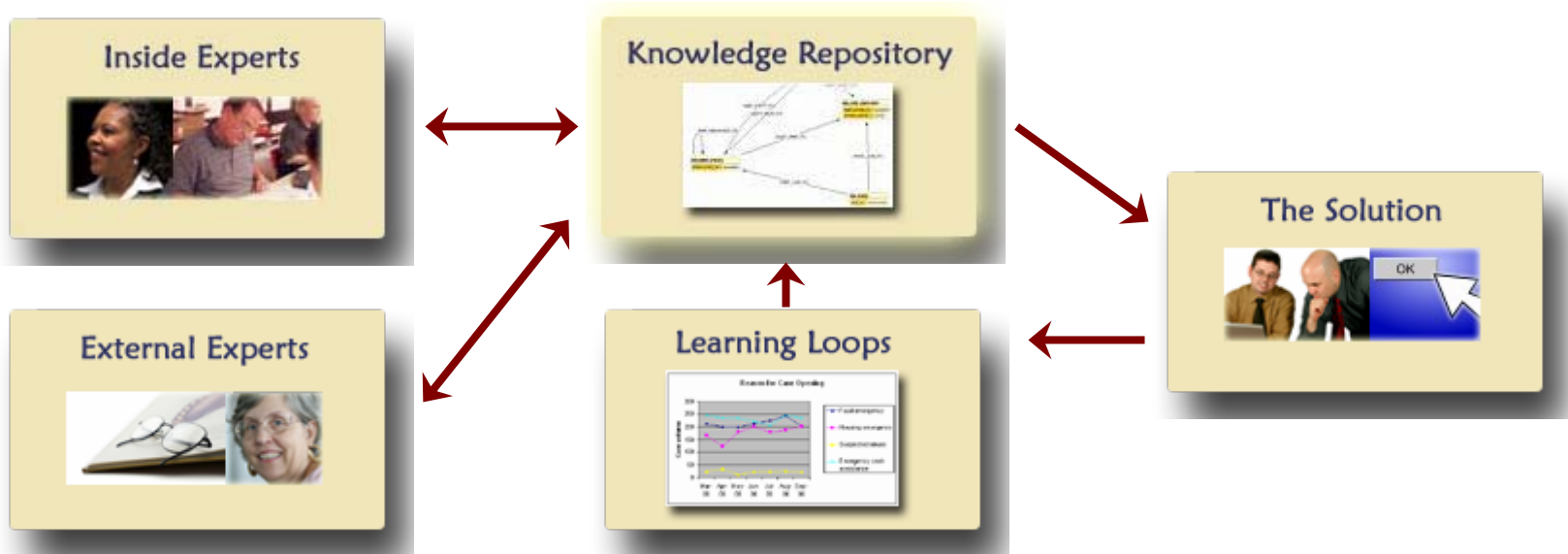
- ✘ Too much rests on the Project Team's initial grasp of requirements
- ✘ Knowledge is baked into the solution with no formal discipline for evolving it
- ✘ The solution represents a point-in-time view of agency needs
- ✘ There is no feedback loop allowing field experience with the system to improve it



Knowledge Transfer >>>

The Knowledge-Enabled Alternative

Knowledge management, not software development, should be the centerpiece of the effort. By choosing a solution that is driven by agency expertise, agencies avoid excessive vendor dependence and can create a knowledge ecosystem able to adapt to constant change.



<<< Knowledge Transfer >>>

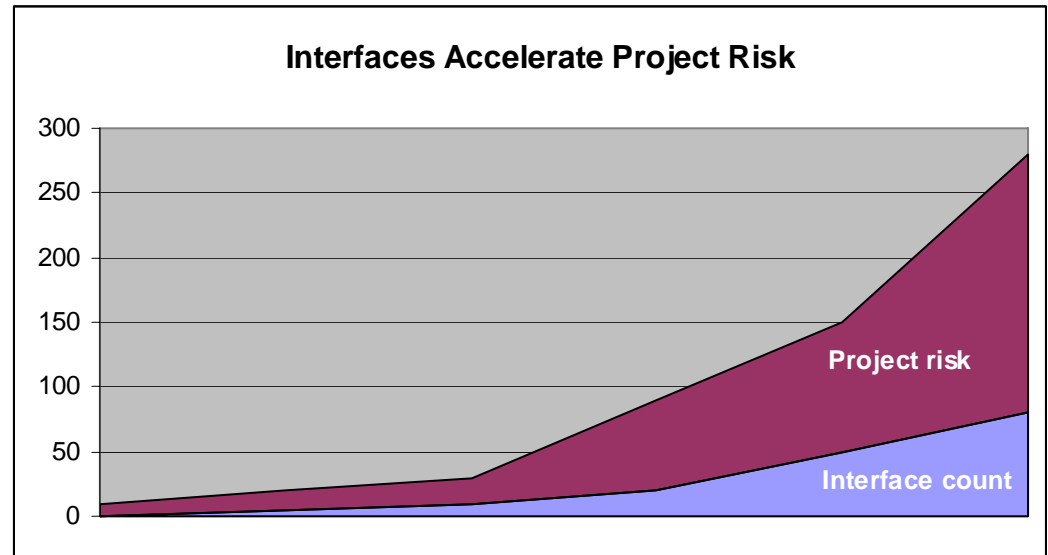
Knowledge Engineering: Best Practices

- ✓ Focal activity during systems transition
- ✓ An ongoing practice – part of agency culture
- ✓ Emphasis on business process, not software engineering
- ✓ Facilitated by knowledge management tools
- ✓ Inclusive of internal stakeholders as well as external sources
- ✓ Key to ensuring staff commitment
- ✓ Protects the agency from knowledge erosion during times of change

Success Strategy #3

- ✓ Leverage emerging human services data interchange standards in tandem with state-of-the-art interface technologies.

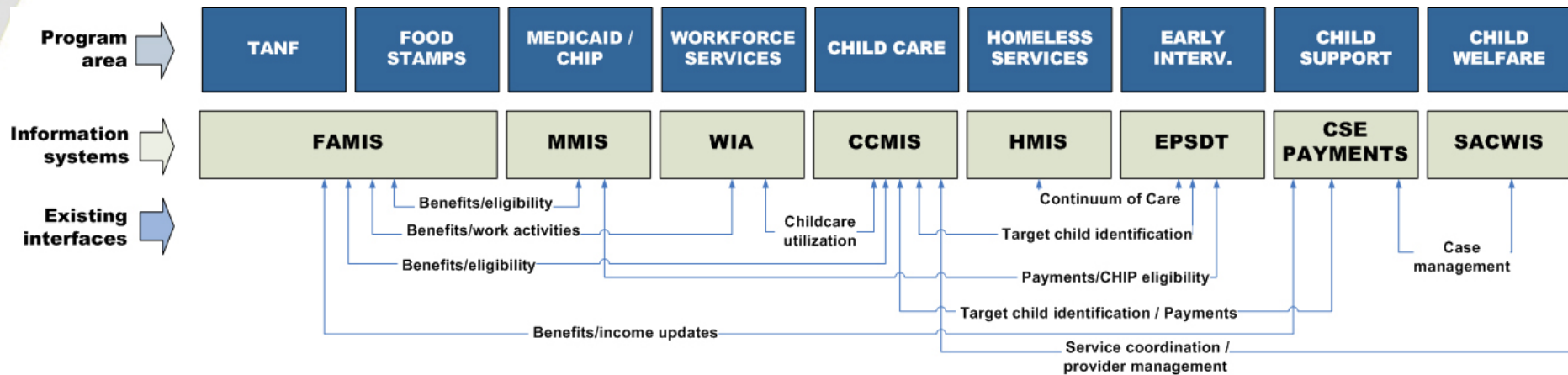
The single greatest challenge in any system replacement is migrating interfaces. Risk of project failure rises out of proportion to the number of operational interfaces.



This risk can be managed by taking advantage of emerging data interchange standards while leveraging proven interface techniques such as the Enterprise Service Bus (ESB).

The Interface Labyrinth

Core human service systems typically participate in more than one hundred interfaces – very few built to modern standards.



System replacement efforts almost always unearth undocumented interfaces buried deep within the organization.

Open Standards Point the Way Toward a Solution

The interface migration challenge has key interlocking parts:

- **Coordination of messaging between dissimilar systems**

The maturing field of enterprise integration software now offers a solid solution to this challenge: the Enterprise Service Bus (ESB). ESBs provide a common “highway” between systems and often offer data translation and workflow tools. By adhering to open standards such as Service-Oriented Architecture (SOA), ESBs provide future-proofing and comparatively low total cost of ownership (TCO).

- **A common vocabulary for sharing data**

Systems can’t exchange data unless they can agree on common data definitions - or can translate between variant definitions. Is a child support “family” the same as a Food Stamps “assistance unit?” Does “case” mean the same thing to a public aid worker and a child welfare worker?

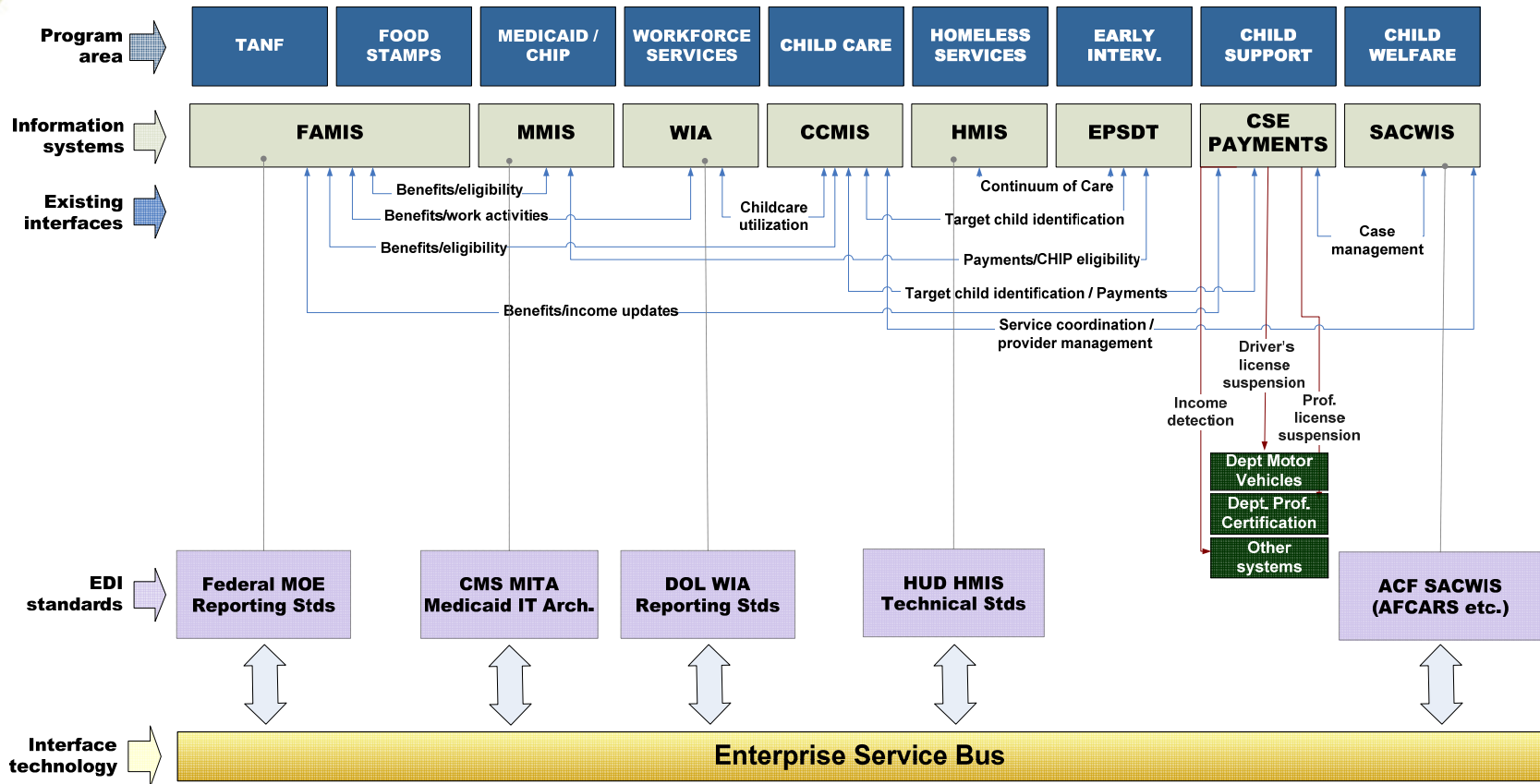
In human services, fortunately, standards for data exchange are emerging...

Some Key Human Services EDI Standards

- **The Medicaid Information Technology Architecture (MITA)** is moving toward creation of a Conceptual Data Model (CDM) based in part on the Health Level 7 Reference Information Model
- **TANF program standards** require states to provide the federal government with a consistent and comparable set of data elements concerning participation rates and Maintenance of Effort activities
- Under the **Homeless Management Information Systems (HMIS)** initiative, Continuums of Care providing services to the homeless furnish HUD with standardized data that is compiled and provided to Congress as the Annual Homeless Assessment Report (AHAR)
- The Alliance of Information and Referral Systems, AIRS, has adopted the **INFO Line Taxonomy** as its standard system for categorizing human services
- In child welfare, the **Adoption and Foster Care Review and Reporting System (AFCARS)** systematizes data collection on children in foster care and children who have been adopted
- The Department of Labor is promulgating standards for collection of data under the **Workforce Investment Act (WIA)**

Toward a Next-Generation Interface Architecture

Emerging data interchange standards coupled with open interface tools point the way toward a solid interface migration approach.



Success Strategy #4

- ✓ Maintain a discipline of measuring results often and quantitatively.

Key dimensions to consider:

- **Procurement Success:**
Did we get what we paid for, without cost or time overruns?
- **Goal Achievement and Public Sector Value (PSV):**
Did we meet our key performance indicators as a result of the project? Are public stakeholders getting full value for their investment?
- **The Public Good:**
Do the public and the broader community benefit from the project?

Measuring ROI in Real Time

- Return on investment is a financial measure, but also a gauge of the project's health
- Choose software that includes strong business intelligence tools capable of generating ROI data **continuously**, not as an afterthought
- Hold vendors accountable for their part: fair and reasonable pricing on the front end, budget and schedule compliance during rollout, manageable long-term costs
- Feed ROI results back into the project via learning loops – the importance of knowledge-enabled solutions

ROI Metrics to Consider

- **How much does it cost to equip my staff with their case management software?**

Metric 1:

Software cost per **staff**-year, inclusive of amortized initial license costs and annual support (Lifecycle cost, annualized)

Metric 2:

Software cost per **staff**-year, support only (Carrying cost)

- **What is the software cost of managing one case for one budget year?**

Metric 1:

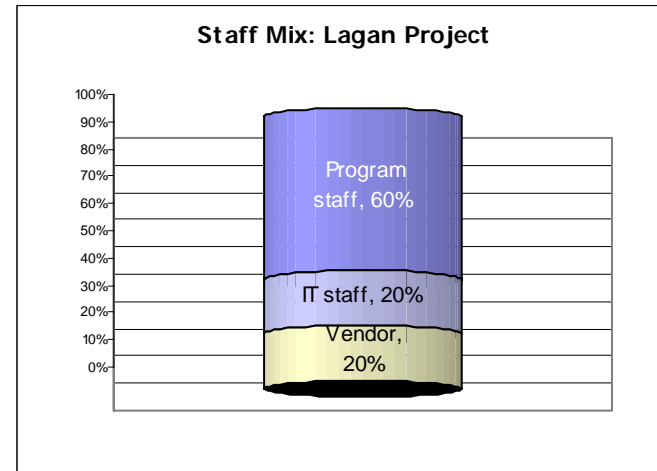
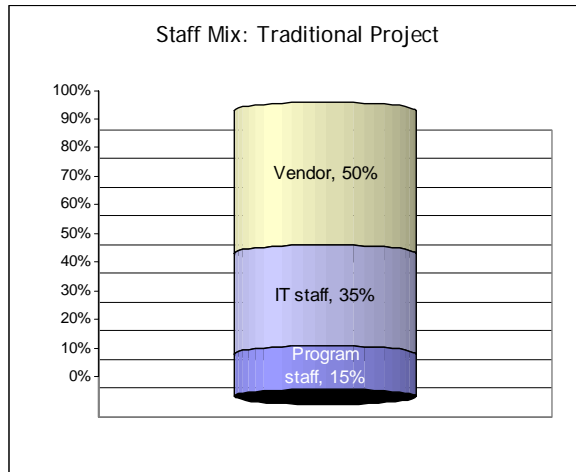
Software cost per **client**-year, inclusive of amortized initial license costs and annual support (Lifecycle cost, annualized)

Metric 2:

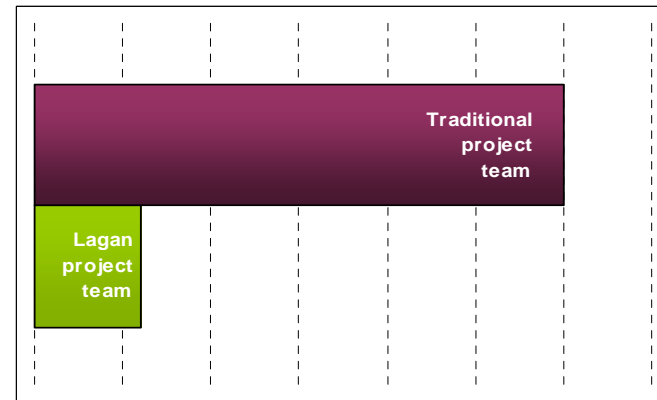
Software cost per **client**-year, support only (Carrying cost)

An ROI Secret Weapon: Leverage COTS!

The staff mix for a knowledge-enabled COTS project team is fundamentally different from that on a custom-build or framework-based project team.



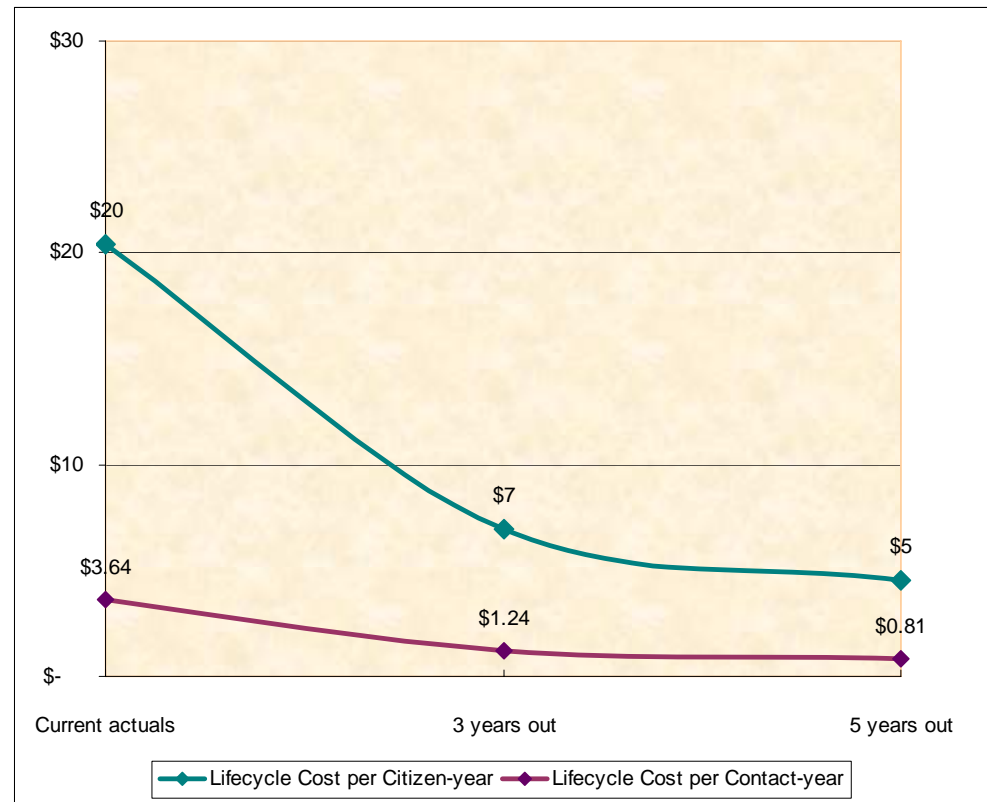
Total team size is also much smaller.



The Virtual Front Office: An Example of High ROI

For agencies that drive a high volume of direct client contacts through a “virtual front office,” the cost per contact and cost per client served decline while better service is being rendered.

The modest initial project cost is quickly recouped in declining transaction costs.



Choices That Foster High ROI

- COTS+ / highly configurable solution
- Knowledge-enabled design
- Strong emphasis on business intelligence, tracking of critical success factors
- Standards-based, best of breed approach
- Vendor's exclusive focus on government
- Vendor's deep subject matter expertise

Planning Points for CIOs

Planning Points - 1

- Focus on commercial off-the-shelf solutions and avoid custom builds, regardless of the technology used
- Commit to an enterprise-class systems integration discipline and strategy, leveraging proven standards-based technologies and emerging data interchange standards
- Look for off-the-shelf applications that incorporate an extensible object data model that can adapt readily as common data standards advance—don't paint yourself into a corner!
- Make sure that key business logic (workflows, policies, eligibility rules) is not embedded in software code and that it can be changed by agency staff—not just by vendors—as information needs and definitions evolve

Planning Points - 2

- Select only those vendors who can demonstrate that they have a truly enterprise view of the challenges agencies face in collaborative case management
- Require that software applications support very robust security and case visibility controls that will facilitate data exchange among different agencies and stakeholders
- Commit to a discipline of continuous ROI monitoring and select software packages that support it



Contact Lagan:

Edward Hamlin

ed_hamlin@lagan.com

Claudia Langguth

claudia_langguth@lagan.com

Visit us on the web at:

www.lagan.com