

Strategic Technology Map for Government Human Services Agencies

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Here, we identify the key functional modules that comprise most human services applications. This research, which is based on a recent survey, examines how each module delivers value to the government agency deploying it or the government beneficiary receiving it. For each module, we rate the expected time and effort to recoup the investment. These three dimensions: government productivity, client service and return on investment, are part of the Strategic Technology Map for Human Services Agencies.

Key Findings

- The approach of buying one, comprehensive turnkey solution to replace existing human services legacy systems was always risky, but now is unnecessary because of the existence of various human services products.
- The modularity of the available products enables government agencies to add new functionality with lower risk while addressing a variety of internal and external pressures.
- Lower-risk solutions ultimately reduce government dependency on system integrators to deploy complex projects.

Recommendations

- Avoid the assumption that the entire collection of legacy systems needs to be replaced in one comprehensive high-risk project.
- Assess which modules and functionality are most needed to address the most-compelling problem your agency faces.
- Make certain your procurement process reflects the very market that exists today, rather than the market of 10 to 15 years ago, when many of the current systems were deployed.

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WHAT YOU NEED TO KNOW

For most of the past 30 years, deploying new human services applications in government was a complex, high-risk, and expensive undertaking that usually entailed replacing all functionality in one massive project (see Note 1). As commercial products such as CRM, business process management, call centers and document management have become more mature, their vendors have pushed hard to enter a potentially lucrative market — government. With products developed specifically for government, agencies are no longer required to undertake large-scale replacement projects. Instead, new tools and technologies can be deployed as needed in pieces that best meet the most urgent business needs of government.

CONTEXT

Citizens seeking government support in the form of income assistance, medical care, child support, child welfare and other programs have a wide range of needs that cannot be met by a homogeneous solution. Indeed, when the U.S. Congress enacted welfare reform in the U.S. states in 1996, the assumption was that government case managers needed to better understand changing needs and develop case plans specific to the unique situation of each individual and family.

Effectively doing so, however, meant that the massive eligibility systems that government relied on for maintaining case data and printing checks would be of little value in understanding and managing the nuances of each case. Although technology investment resources were made available to the states by the federal government to help deploy new technologies to solve this problem, the technology available in the mid-1990s was not really up to the task and hadn't been developed for the specific needs of government agencies. The proliferation of new technologies and applications stemming from the dot-com era (1995-2001) resulted in the development of considerably more-suitable technologies, as well as the configuration of those technologies to meet the needs of government.

Outside the U.S., some national governments have experienced similar epiphanies about better aligning needs with available solutions, rather than seeking a one-size-fits-all approach. Unlike the U.S. market, where 50 similar state programs often make investment in new technologies worthwhile for software vendors, national governments — where there is historically little market for repeatable solutions — have been even more reliant on custom-built software solutions to meet the needs of their human services agencies.

Throughout the world, societal needs continue to evolve at the macro- and individual levels. Government policymakers are responding to these changes by creating more programs and/or demanding better outcomes from existing programs. To cope, the agencies that administer these programs are under increasing pressure to develop IT systems that are more powerful, provide greater ability to understand and track the needs of government clients, and are able to change more easily as policy and related business rules change. Here, we intend to help agencies better understand what their internal needs are and how to align those needs with what is available in the marketplace, how to assess value of what is available, and how to make better investment decisions instead of the previous approach of simply attempting to replace everything at once, as has traditionally been the case.

ANALYSIS

To best understand the software needs of government human services agencies, Gartner first created a list of the key human services modules or capabilities that constitute a state-of-art

approach to managing human services. This list was generated through many contacts with human services agencies, software vendors and subject matter experts in the system integrator community. Table 1 lists in alphabetical order the 24 key functional modules that resulted.

Table 1. Key Human Services Functional Modules

Module	Description
Appeals Management	In some cases, the applicant will disagree with an agency decision and exercise an appeal. The module will manage the appeals process within the case and connect it to scheduling and other resources required for the appeal to proceed.
Assessment and Triage	An initial rule-based assessment of the applicant's problem and possible solutions. This may include directing the applicant to the appropriate solution.
Call Center	These tools enable call center agents to have sufficient knowledge and automation to process high call volume with real-time access to appropriate case information. Tools include scripting capability for agents to manage complex interactions and data gathering.
Case Management	This module provides comprehensive case management functionality to create, manage and track case activities or claims relating to individual programs. This includes cross-team plans, need-to-know access to case components, and the ability to link case events to process workflow.
Certification	In some programs, eligibility is contingent on an applicant/recipient being certified as meeting certain conditions, often for a fixed period of time, by an outside source. This module will recognize and manage this certification process.
Change in Circumstances	This module enables the ability to track the need for and the ability to initiate a reassessment of eligibility. May also include the dynamic capability of detecting a change in circumstances that requires a reassessment.
Collections/Overpayment Processing	If an overpayment is made in a case, this module tracks and manages the receivable and activities to collect.
Contract Management	This creates, manages and tracks contracts between the host agency and external service providers for the provision of services to clients.
Contribution Management	This module is responsible for creating and maintaining a history of insurance contributions and provides the necessary management information to enable an organization to carry out its day-to-day business operations for claim/liabilities processing, noncompliance and investigation.
Eligibility Determination	This module is a program-specific algorithm that determines the applicant's eligibility.
Entitlement/Grant Determination	This rule engine calculates what an entitled applicant is eligible to receive.
Evidence/Document Management	Eligibility typically requires submission, gathering and maintenance of a variety of documents and information from outside sources. This module captures and stores that data and associates the data with a particular case.

Module	Description
Financial Management/Payment Processing	This module provides case-related and program-related financial processing for each service delivery and for each participant type. Financial management is responsible for creating and maintaining the financial schedules and subsequent transactions for program-related payments and deductions.
Intake	This module concerns registering an individual and capturing and recording the information needed to determine whether an applicant is eligible for a specific program.
Mobile Worker Support	This management capability of the field services channel enables mobile workers to conduct business in real time.
Outcome Tracking	This module involves the ongoing assessment and measurement of whether the intended outcome or disposition of a case was achieved, as well as the planning of any required follow-up or case maintenance.
Outreach/Notification	Agencies often require the need to notify current clients and individuals of interest of changes in policies or the availability of resources. Modules that enable parsing of notifications lists based on case characteristics are required.
Person Management	This provides a robust view of a person — basic demographics, services they are receiving directly (client), links to all related individuals for each case (such as involved professionals, dependents or caretakers), links to any other benefit units they are part of (such as family or household)
Place and Assignment Management	This module provides the functionality to link a provider to a set of characteristics that can be used to assign a participant to the provider. It also includes the ability to track and manage the resources available and the utilization of those resources through placements.
Provider Management	Provider management tools enable the host agency to share relevant functionality to external parties such as service suppliers, product providers and employers. This module enables the agency to maintain profiles about providers and contract information.
Resource/Service Management	This module enables the agency to determine what resources, internal or external, are available to participate in a case. This typically includes the name and capability of the organization, the number of “slots” available, the rates, contact information and other pertinent data to optimize the placement. This module also includes scheduling capability.
Skills Management	A database of employee skills enables cases to be assigned to the correct individual for the appropriate services.
Verification	This module consists of an administration component and a case management component. The administration component allows the user to define the data items that require verification and the means by which these verifications can be attained. The case management component allows the user to record the actual verifications.
Web Self-Service	Certain functionality can be made more efficient if it is made accessible for the applicant or client in a user-friendly format. Modules for triage, intake and self-assessment may be appropriate for direct client input.

Source: Gartner: July 2007

1.0 Building a Strategic Technology Map

The modules described in Table 1 meet a wide variety of programmatic needs for a government human services agency. However, not all agencies have the same sort of immediate programmatic or technical needs, nor are they responding to the same sort of political pressures. Using the Strategic Technology Map process developed by Gartner's retail research organization (see "Let Customers Help Design Your Technology-Enabled Store of the Future"), Gartner measured the impact of the 24 modules identified in Table 1 in meeting internal and external needs.

Internal needs of government agencies most commonly focus on "government productivity." To create this dimension, we focused on the most fundamental internal value that government human services agencies would obtain from these modules (see the y-axis of Figure 1). The internal value elements identified were:

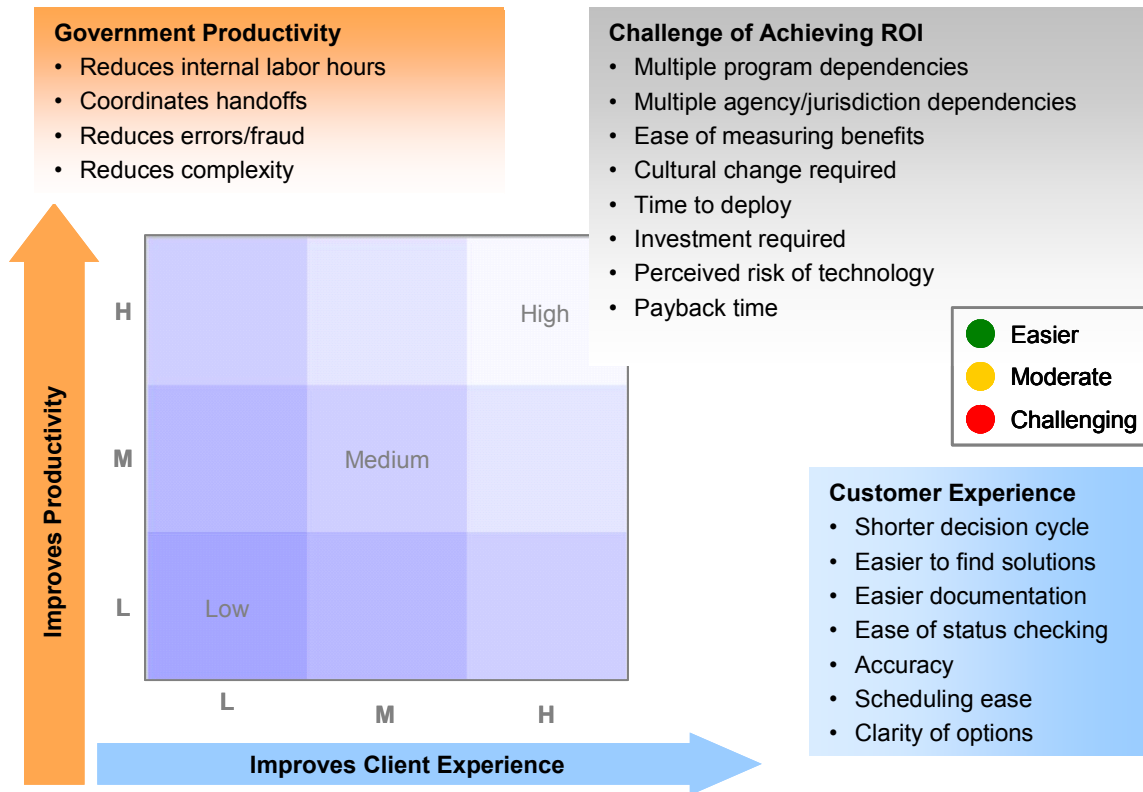
- **Reduced internal labor hours:** Does the module improve automation of a process thereby potentially reducing the amount of labor required to perform the process or activity?
- **Coordinated handoffs:** Does the module automate the transfer of information from one provider to another or automatically cause the next step in a process to be scheduled or occur?
- **Reduced errors/fraud:** Does the module improve accuracy or contribute to a reduction in potential internal or customer errors or a reduction in fraud or an improvement in the detection of fraud?
- **Reduced internal process complexity:** Does the module simplify processes, provide greater clarification to participants in the process, or automate decisions to minimize the complexity of decision making?

At the same time, these functional modules also vary in their impact on the applicant or client. Thus, to create the external dimension, or "client experience," we focused on the key benefits a client or applicant would get from new technology (see x-axis of Figure 1). The external value elements identified were:

- **Shorter decision cycle:** Does the module enable decisions about eligibility or entitlement to be made and/or communicated more quickly?
- **Ease of finding programs to solve problems:** For an applicant, it takes less effort or is less confusing to determine where to apply for something, how to apply or what to apply for.
- **Ease of providing documentation to prove eligibility:** Many programs require submission of additional documents and paperwork. Does the module make it easier for the applicant/recipient to comply with these requirements?
- **Ease of checking the status of requests or applications:** Does the module make it easier for the applicant/recipient to find out the status of a request or service?
- **Accuracy of the information received:** Does the module improve the accuracy of the decision or help ensure that the right decision is made?
- **Ease of scheduling follow-ups:** Does the module make it easier for the client to schedule appointments for activities they want or activities mandated for compliance?

- **Clarity of the various options available:** Does the module make it easier for the client to make decisions by making it clear what his or her choices are?

Figure 1. Strategic Technology Map Template



Source: Gartner (July 2007)

However, measuring value — internally or externally — does not complete the picture, because in a political environment the system needs to be deployed successfully and in a relatively short time — usually before the next election. Thus, a third dimension must be addressed: the challenge of actually achieving the expected return on investment (ROI). To do so, we considered the impact of the following challenges (see Figure 1) that affected ROI:

- **Multiple program dependencies:** Does the success of the module depend on other programs within an agency to be effective?
- **Multiple agency/jurisdiction dependencies:** Is the module difficult to deploy because its effectiveness depends on deployment outside the host department/agency?
- **Ease of measuring the benefits of the module:** Does the module perform a function that, when deployed, has quantifiable benefits?
- **Amount of internal cultural change required:** Is the effectiveness of the module dependent on changes in behavior and/or organizational culture of the host agency?
- **Time to deploy:** Does the module simplify processes, provide greater clarification to participants in the process, or automate decisions to minimize the complexity of decision making?

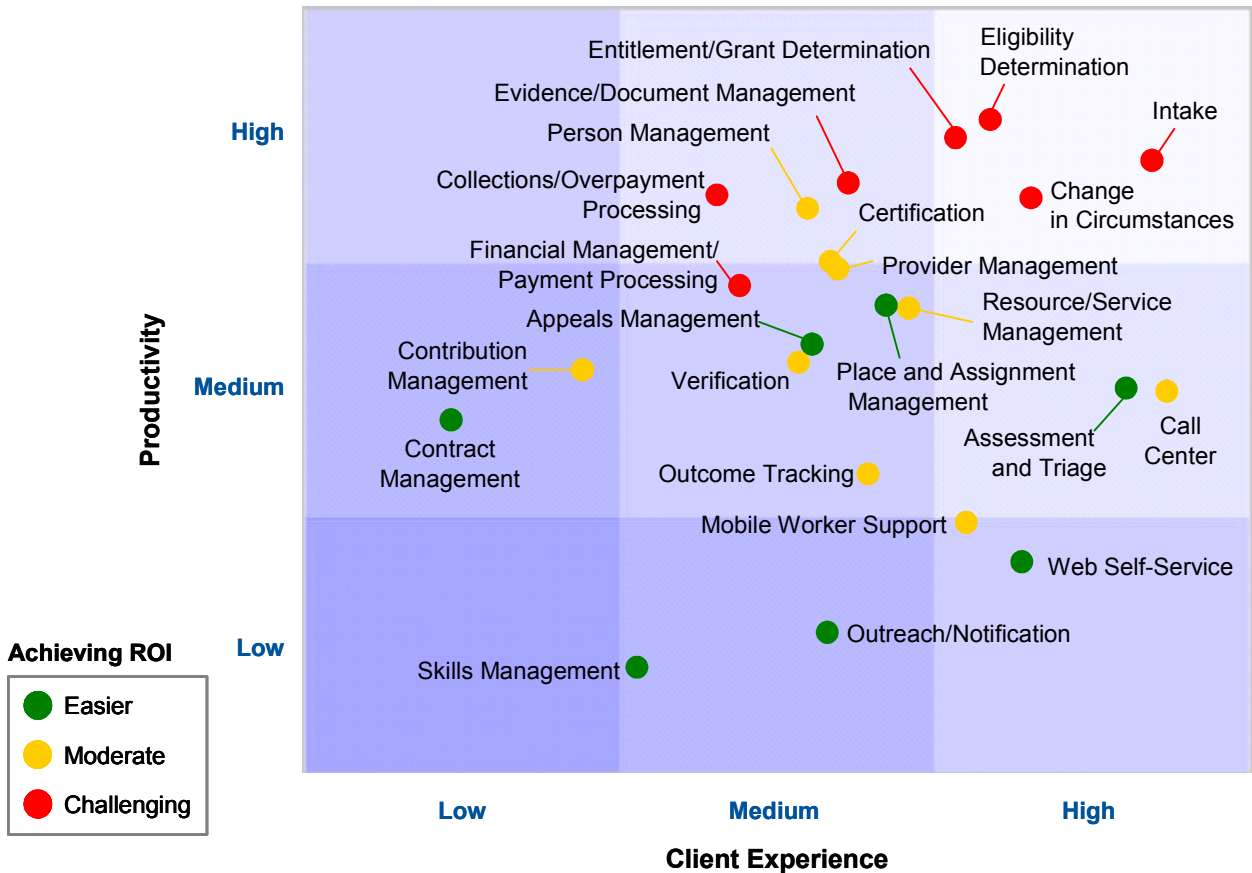
- **Monetary investment required:** How expensive is the module relative to the agency budget?
- **Risk of the technology:** Is this module well-established in the human services environment?
- **Payback time:** How long before the benefits of the module achieve expected financial return?

2.0 Gartner Survey Used to Build a Sample Map

In our next step, Gartner presented a survey instrument to a group of human services CIOs, human services software vendors, and subject matter experts within system integration organizations. For each of the 24 modules identified in Table 1, each respondent was asked to provide a weight for each of the factors described that made up the three dimensions identified in Figure 1. For government productivity, the higher weights were given to functional modules that did the most to improve internal productivity. For client experience, the higher weights were given to the modules that most improved the client experience. For ROI, the higher weights were assigned to the modules that presented the greatest challenges in deployment.

The responses of the survey participants were averaged for all 24 modules across all three dimensions, with the results appearing in Figure 2.

Figure 2. Functionality Value Scores



Source: Gartner (July 2007)

Not surprisingly, the functions that provide the greatest value to the client and toward government productivity (those in the upper right corner) were also the most challenging to deploy. Eligibility determination, grant calculation, the intake process and tracking changes in the clients' circumstances are the most complicated aspects, not only of existing systems (to the extent those systems are capable of doing those things), but also of the new products available today. These four modules are most dependent on a complex array of interconnected business rules that represent the critical public-policy issues of whether someone is eligible and what they are eligible for. However, for most human services agencies, these are also areas where the existing systems are the weakest or where they are not automated at all, instead relying on human judgment that may not always be consistent across all employees.

3.0 Why and How to Use This Strategic Technology Map

For agencies considering investing in new technologies, using the Strategic Technology Map can be vital in making more-appropriate investment decisions while minimizing the risk associated with replacing everything at once.

Even if your current technology is outdated and poor at delivering the functionality that users in your agencies demand, history has shown that replacing everything at once is risky and seldom successful. Moreover, with more product functionality available on the market today, there is no

longer a need to rely on custom-built solutions, the "transfer systems" historically preferred by the U.S. federal government funding agencies, or the "rip and replace" approach of the past.

Whether you are the CIO of the human services agency, one of the program managers, the executive overseeing the project, or even an integrator tasked with cobbling together a new solution, this approach should be considered in using the model.

1. **Identify your compelling need:** This is often directly related to the political agenda of your government. Is the government driven to improve government performance and productivity? If yes, then greater weighting for the y-axis is required. Is the government driven by providing benefits to citizens more quickly? If yes, then greater weighting for the x-axis is required. During this step in the process, you'll also need to identify the variables that make up each axis. In Figure 1, we identified several of the most common factors that contribute to government productivity or client impact. You may identify others of immediate concern to your political leadership.
2. **Identify your business problem:** Presumably, as a result of political pressure, action is required. During this step, you will need to identify what it is that your programs are not doing or not doing well that requires changes. For this, refer to Table 1, which, in addition to key technology modules, also identifies the critical steps in the processes. Which ones of these do you do well? Which ones do you do poorly?
3. **Rank your shortcomings:** Using the list in Table 1, conduct internal surveys to determine which of these are the most important (or most in need of replacement) within your agency. Have survey respondents provide a weight based on the importance of each module for the factors that make up each axis. The survey results will produce relative weights for internal improvement and customer impact, which should be evaluated using the approach used to create Figure 2. This approach will identify the modules that you most urgently need to support the business of your agency. External customer surveys might also be considered to understand which client needs are not being met as well as desired.
4. **Scan the market:** Once you've identified the functionality you need and the order of importance in which you need it, determine which vendors can meet the most-urgent needs. What do they have to offer? How risky is deployment? Are there dependencies with other modules? How expensive is deploying it? How long will it take to deploy it? These questions might seem to imply you've already begun your formal procurement process. Avoid the urge to ask these questions through a formal tendering process at this stage. Instead, use a request for information (RFI) approach. Or, better yet, identify appropriate vendors and ask them to describe their offerings before you start writing bid documents.
5. **Conduct an ROI and fit-gap analysis:** Using what you learned informally in Step 4, revisit your list of needs generated in Step 3 to assess the challenges of getting the most-urgent pieces installed. Is there "low-hanging fruit" that can be implemented quickly and easily? Is there a phased approach that will enable you to gradually deploy everything you need without replacing everything you have? In this step, consider the technical implications of what is available. Does one vendor have everything you need, or will you be better off using multiple products or sources? How well do the products fit your business processes or will significant changes be required in either your processes or the product configuration? Use your technical resources to score the third dimension of challenges described in Figure 1.
6. **Develop the portfolio management strategy:** Once the modules to be added/replaced are identified, map out what will be added and what will be discontinued. This step

should also include planning for what will be turned off and no longer supported. This is vital for planning the use of internal staff resources, and could be critical in building the business case (Step 7) by saving money on maintenance for existing applications (see "Meshing Architecture, Project and Application Portfolio Processes for Effectiveness" and "Using the Application Partition Model to Plan Your Portfolio's Evolution").

7. **Build the business case:** Once you identify your most-immediate needs and which products or solutions best meet those needs, work with the programs managers to build the business case for determining what the agency will do. Determine which functionality to tackle first and what the road map to the finish line will look like. Obtain organizational buy-in as to where internal processes will be altered using best practices, versus areas where significant product configuration or even custom code will be required. Create a strategic technology map for your agency, much like the one in Figure 2, which will show how everything you intend to buy or build maps to government productivity, client impact and ROI. Determine which internal skills and resources will be required to deploy and maintain the modules as they are being added to the overall solution.
8. **Conduct the procurement:** Ask the vendors (product or services vendors) to propose solutions as laid out in the business case. Demand modularity. Focus on product modules where they exist. Avoid turnkey solutions for the whole project. Change your procurement approach (see "Evaluating Best Value in Government Procurements" and "Tactical Steps to Government Procurement Reform"). Be certain, as you conduct the procurement, that functional needs are clearly identified, rather than delineating a specific solution. During the procurement process, determine the kinds of challenges to be faced with integration of specific modules with each other and with existing legacy systems. Identify your current technical operating environment so respondents can help explain how the solution will fit, be integrated and be maintained most effectively.

This approach can be used whether you are buying a product or building a solution. With the availability of more products and a marketplace that is increasingly responsive to the unique needs of human services agencies, this is the opportunity for agencies to be more selective in what they buy, more creative in how they buy it, and more demanding in ensuring that they and the vendor community are able to meet project expectations.

4.0 Recommendations

- Avoid the assumption that the entire collection of legacy systems needs to be replaced in one comprehensive high-risk project.
- Assess which modules and functionality are most needed to address the most-compelling problem your agency faces.
- Make certain your procurement process reflects the very market that exists today, rather than the market of 10 to 15 years ago, when many of the current systems were deployed.

RECOMMENDED READING

"New Solutions for Government Human Services"

"Federal Software Policy Shift Can Help Human-Services Agencies"

"A Revolution in Human Services Administration Is Coming"

"Curam Software Holds Its First International User Conference"

"Lagan Is a Viable Entrant in the Welfare Systems Market"

Note 1

Human Services

We use the phrase "human services" throughout this document. Here, a government "human services" agency is one that provides benefits or care of some sort directly to citizens who are not government employees. Therefore, human services should not be confused with "HR," which is most commonly the internal personnel management organization within government. Human services programs can take many forms, including these types of government programs: income assistance, child support, child welfare, protective services, unemployment insurance, workers' compensation, veterans' benefits, medical assistance, mental health services and homeless assistance.

This research is part of a set of related research pieces. See "Government Human Services at the Precipice of Radical Change" for an overview.

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