

Critical Capabilities for Integrated Tax System COTS Products, 2010

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Integrated tax system (ITS) commercial off-the-shelf (COTS) software products are applications that automate transactional processes of government revenue agencies, such as taxpayer registration, return filing and processing, as well as management activities, such as revenue accounting and reporting. This research will help government IT and revenue agency executives understand the strengths and weaknesses of ITS COTS products marketed by global IT suppliers, such as SAP, Oracle, TCS and Bull, as well as domain-specific vendors, such as Crown Agents, RSI and Fast Enterprises, to support the RFI/RFP selection process.

Key Findings

- ITS COTS products have gained traction in state, provincial and local governments worldwide in the past 10 years.
- National governments, especially in Western countries, have opted for legacy re-engineering programs, but increased pressure to cut costs and lack of internal skills could drive them toward COTS adoption.
- All ITS COTS packages provide good out-of-the-box capabilities for revenue and taxpayer accounting, and for collection management. However, they require significant configuration and customization efforts for tax return processing, taxpayer registration and relationship management, and for the most complex case management use cases in auditing and collection.

Recommendations

Government revenue agencies that are selecting ITS COTS should:

- Analyze business processes in depth to lay the foundation for a fit-gap analysis, but also invest in program management methodologies and skills to ensure the success of the deployment.

- Carefully evaluate whether you prefer to use product suites that allow quicker implementation timelines and process consistency, but require an out-of-the box approach, or if you want to use a modular approach that allows you to reuse services and integrate the system with other applications and business intelligence tools, but needs long-term senior executive commitment; internal skills for transforming business processes, roles and policies; and support from system integrators.

What You Need to Know

Government revenue agency IT executives who are tasked with the selection and implementation of COTS products for ITSs should ensure that high-level sponsorship from the tax commissioner, a cabinet-level secretary or the treasurer is in place. A program management office should be accountable to the high-level sponsor and be responsible for financial management, business analysis and IT skills, project management, training, communication, change management and user testing. The change management component will be key and can absorb up to 20% to 25% of the overall program budget. The program management office should carefully phase in the implementation by tax type — for example, by bundling corporate income, sales and use (or value-added tax [VAT]) to leverage common modules, such as business taxpayer registration.

The product selection process should start with an in-depth analysis of business, application, and information architecture requirements that will be the basis for a fit-gap analysis of the functional and technical capabilities of the COTS products. The analysis will also form the basis for business process re-engineering, because the age-old paradigm of baselining business requirements and expecting that the software will adapt to existing business processes will not work with a COTS product. Without process re-engineering, implementing packaged software would result in longer implementation timelines and uncontrolled total cost of ownership (TCO).

The COTS application architecture must take into account interfaces with other components, such as data warehouse and business intelligence tools for discovery, audit and fraud detection. It must also integrate with other government systems, such as property, business and citizen registries, or third-party systems, such as banks. Understanding the current and future architecture will be key for the data migration. The tax agency should define the data that has to be migrated to the new database to allow historical analysis of revenue and taxpayer accounting trends. The technical migration should be done in close collaboration with the COTS vendor — particularly to avoid engineering overly complex extraction mechanisms that would make auditors, collectors, managers and, most importantly, the tax commissioner unhappy with reporting.

The product implementation and go-live phase, which usually takes between two and four years, depending on the size of the agency, number of taxpayer accounts and number of tax types to be migrated, will be the initial phase of the system life cycle. Agencies also need to consider the changes, maintenance and running costs that will materialize over five to seven years after the go-live phase that will be part of the TCO. Therefore:

- Architects and business analysts must understand the degree of configurability of the products, because changes in legislation, such as tax credits, will impose quick turnarounds in tax forms and business rules.

- An application competence center (see "Toolkit: Guide to Designing an Effective Business Application Competence Center") should be considered for the ongoing maintenance and operations of the system. This will avoid having individual functional experts or tax program managers ask for uncoordinated changes and upgrades that will undermine the integrity of processes and data.

Analysis

Introduction

Tax and revenue agencies around the globe face increasing pressure to replace their 30-year-old legacy, mainframe-based applications (see "Government Tax and Revenue Agencies Are at the Tipping Point of Application Modernization"). Some of these applications are tax-specific. Thus, they seldom allow the use of common functions, such as billing and collection, across different tax programs, nor do they allow tax administrators to have a single view of the taxpayer, which allows for credits and debits to be offset for the same account. Other applications were custom built to automate fractions of processes, such as merging letters that are sent to delinquent taxpayers, or laptop tools for field auditors. Thus, they require navigation across different interfaces and do not preserve the consistency of data. Furthermore, the technology platforms that were used to build these systems are obsolete, and it is very expensive (if at all possible) to find expert technicians who are able to make changes to the code as new laws are approved, or new business transformation programs are launched.

During the past 10 years, many tax agencies completed modernization programs. Some of them have approached application modernization by re-engineering legacy systems and applying service-oriented architecture (SOA) principles, such as the Copernic Program at the Direction Generale des Finances Publiques (DGFIP) in France, while others deployed COTS software packages, such as the state of Colorado Integrated Tax Architecture (CITA) project. In fact, the combination of shortage of staff and budget, the enhanced functional breadth and depth of COTS products, and the maturity of COTS deployment methodologies has spurred the adoption of ITS packaged products at the national government level in emerging countries, and especially at the state and local level in the U.S. and Canada.

Product Class Definition

ITS COTS products are software packages that automate parts or all the transactional processes that a government revenue agency typically handles:

- **Taxpayer relationship management:** This includes multichannel interaction management, correspondence management, contact management, marketing and education.
- **Revenue management:** This includes taxpayer identification, return intake, return processing, taxpayer accounting, billing and collection, and revenue accounting.

- **Case management:** This includes both generic case management capabilities, such as creating, updating, cancelling, holding, reactivating, approving, closing and auditing cases, as well as specific types of cases, such as collection, audit, delinquency and bankruptcy.

ITS COTS products also include a set of generic features and tools that enable more-advanced, tax-specific functionalities to run. Examples include analytics, reporting, data management, workflow, document management, search and security (see "The Government Tax and Revenue Domain: A Gartner Market Definition").

In some cases, ITS COTS products include functional capabilities to support tax compliance programs, such as data warehousing, lead discovery and predictive analytics (see "Tax Compliance Solutions for Government Revenue Agencies: A Gartner Market Definition"). Those capabilities were analyzed in a separate study ("Tax Compliance Solutions for Government Revenue Agencies: The 2010 Business Intelligence Software Vendor Landscape").

The adoption of ITS COTS products varies greatly across both geography and levels of government:

- ITS COTS products started to get market traction approximately 10 years ago at the state and provincial government level in the U.S. and Canada. Departments of Revenue needed to replace the legacy applications they used to process tax returns and collect revenue from individual income taxes, corporate income taxes, sales and use taxes, withholding taxes, fuel taxes, and other excises. Some state departments of revenue that adopted these COTS systems 10 years ago are approaching the end of the useful life cycle of those products and are expected to initiate a cycle of replacements in the next two to three years. Fast Enterprises is the vendor that initially captured a portion of the market opportunity and replaced legacy systems (both custom-built and those based on solution frameworks developed and deployed by system integrators). SAP was the first follower of Fast Enterprises, Oracle entered this market in 2007, and RSI entered in 2009. TCS introduced the TCS ITS COTS product with an implementation in 2002 with a local government client.
- In parallel with the growing adoption of ITS COTS products at the state and provincial level in North America, some vendors, namely TCS, Crown Agents, Bull and CRC Sogema (see Note 1), developed and deployed packaged software solutions for central and federal government revenue agencies in emerging countries. In most cases, those revenue agencies had to migrate from paper-based (or poorly automated) processes to digitized processes for the assessment and collection of individual income taxes, corporate income taxes, value-added taxes, customs and excises. These vendors gained a strong market presence in Asia, Africa and Latin America. SAP and Oracle are increasingly targeting these markets, and have won some contracts in the past two years.
- Central and federal government agencies in Western countries, in Japan and in Australia have showed a limited appetite for ITS COTS. The complexity of processes, the number of tax types, the kinds of tax credits and deductions, and the size of those operations, both in terms of taxpayer accounts (tens of millions, instead of the millions at the state and provincial level) and in terms of the amount of transactions, have presented technical scalability and business process and cultural change risks that revenue agency CIOs preferred not to take. Furthermore, many of those national revenue agencies have expanded their mandate to include non-tax-related revenue and welfare programs. Therefore, in the past 10 years, application

modernization projects have continued, but were focused on re-engineering existing legacy systems. For example, such re-engineering included the migration to new generations of programming languages, the development of Web interfaces for internal users and taxpayers, and the combination of SOA and business process management to expose the business logic and reduce the duplication of application services. The mounting budget pressure that has materialized in the past three to four years has driven some national government agencies to consider ITS COTS. However, Gartner expects that growth of COTS adoption in this market segment will remain slow for the next two or three years. It must be noted that some state governments in the U.S., such as New York, Arizona and Maine, have taken an application modernization approach as well.

- Local governments worldwide collect a limited set of tax revenue; in fact, most of them collect only property taxes. The collection of property taxes requires specific functionalities for the appraisal and assessment of parcel value and record of deeds, which are highly dependent on national or regional legislation. Consequently, a number of domain-specific software vendors have prospered in each country, such as Manatron and Tyler Technologies in the U.S., Northgate and Capita in the U.K., and TechnologyOne and Civica in Australia. These localized solutions will not be part of the current analysis. It must be noted that some local governments have used the ITS COTS products described in this study for the collection of income taxes or sales taxes, in the few cases where they are entitled to levy them, or for the collection of business licensing and permitting fees.
- In some cases, central and federal government agencies are also responsible for customs. Some of the vendors included in this study have solutions for customs, such as Crown Agents and Bull, or partner with specialist suppliers, such as SAP with Tatis. However, customs management solutions require specific functional capabilities for inspections and logistics that are not typical of ITSs, or are handled by separate units, even if they coexist within the same government department. Therefore, they will not be analyzed in this study.

Alternative software acquisition models, such as the reuse of solutions from other agencies, community source, open source, alternative service delivery models (such as managed services and cloud application services, aka software as a service [SaaS]) have had limited impact on tax agency application modernization, and they are not expected to increase their penetration in the next two to three years. A notable exception is in the property tax segment at the local government level, where Gartner has observed examples of shared services (see "Case Study: Business Process Analysis Underlies Launch of Local Government Shared Service in the U.K.") and managed services, both in the U.S. and in the U.K.

Gartner has observed some examples of revenue collection business process outsourcing (BPO) at the state and local government level in the U.S. Although this market is still in its early stages, it could produce a fundamental change in the way ITSs are acquired. Some agencies could let their BPO provider make that choice, and others might want to retain some control of the technology — but they will have to coordinate closely with the BPO provider to make sure the private partner can use the software.

Shared services are starting to have an impact on tax collection. Some jurisdictions are considering or implementing arrangements to collect taxes across multiple government organizations. For

example, the Canada Revenue Agency provides shared collection capabilities to provincial governments, and the Department of Revenue in the state of Massachusetts hosts a data warehouse clearinghouse for shared discovery of audit leads across state boundaries. In other cases, centralized collection of revenue is happening within the boundaries of one government jurisdiction, with the tax or treasury office taking the lead as the shared service provider for collecting tax and non-tax-related revenue, such as business and individual licenses, building permit fees and parking tickets. These trends are in their early stages and will require profound transformation of processes, roles and policies, but they will have an impact on the ITS COTS, because there will be fewer buyers of those systems and, in the latter case, these applications will have to be flexible enough to support multiple revenue streams, not just tax programs.

Critical Capabilities Definition

- **Online self-service:** This capability allows taxpayers to create and update their identification data, file returns, view accounts, and search for information via a website or portal, or it enables intermediaries, such as tax advisors and accountants, to perform those operations on behalf of their customers.
- **Taxpayer registration:** This capability enables agencies to register taxpayers by recording personal identification details, such as name and address for individuals, or business status and industry classification code for companies. This also enables agencies to create accounts by tax types and establish relationships with taxpayers, and to track relationships among taxpayers, such as family members or businesses and their managers or shareholders.
- **Return processing:** This capability allows tax assessment officers to receive files; identify duplicate returns; add and update notes; reverse, transfer, hold or release returns; identify exceptions; audit and track adjustments; compare and offset returns across tax types; and update taxpayer and revenue accounts based on finalized assessments.
- **Taxpayer accounting:** This capability allows tax officers to view statements by period and frequency; view liabilities, payments and abatements; adjust history; perform ongoing case audits; and offset debts and credits.
- **Billing and collection:** These capabilities apply payments by tax type; adjust payments; record balances; accrue, reverse and waive interest and penalties; carry forward payments; manage payment plans and refunds; and create view, update and send bill notices.
- **Revenue accounting:** This capability allows for recognition of revenue, to account for received cash, to apportion amounts and to reconcile them with the general ledger. It also provides the ability to report revenue and payments by period, revenue category, jurisdiction and the largest taxpayers. It also allows the agency to forecast revenue and to drill down into transactions by linking into taxpayer accounts.
- **Case management:** This capability provides generic functionalities to create, assess, update, cancel, reactivate, hold, delay, release, assign, reassign, schedule, reschedule, record notes, approve, deny, enforce, close and audit cases. It also can provide preconfigured types of cases — for example, collection, field audit, office audit, delinquency, bankruptcy and appeal.

- **Security:** This includes a set of capabilities for user authentication, authorization and administration, and for encryption of transactions, such as online filing. It should also provide reporting to audit users that accessed and made changes to accounts.

Use Cases

Each tax agency has its own set of use cases. The following list is not meant to be exhaustive or to match the processes of any tax agency in particular. The objective is to outline some key use cases that Gartner has discussed with tax agencies around the world and to describe the role of each critical capability in performing those processes (see Table 1 for a quantitative estimate):

- **Taxpayer filing:** An individual taxpayer needs to file an annual tax return. This process entails providing personal identification data and data from his employer declaration to assess the taxable income, providing data on deductions and other information that is the basis for exemptions, performing a calculation to view the amount due and submitting the return. The return filing process can take place in paper form, in which case, it will have to be handed in to a tax agency office counter or mailed to the office, but more often government tax agencies are offering, or mandating, electronic filing directly for the taxpayer, or through a tax advisor. Taxpayer registration capability is necessary to ensure the identity of the taxpayer. Taxpayer accounting allows taxpayers to review previous filing, payments and debts. Online self-service is becoming the most common method for electronic filing. In some cases, this is directly provided by the tax agency. In other cases, this is provided by private intermediaries that transfer a file (for example, in XML format) to the tax agency. Wizards can then be used to provide guided filing of subsections of the tax declarations, instead of filing the entire form in a single Web page. Security capabilities, particularly identity management and encryption, are necessary to authenticate taxpayers and secure transactions.
- **Tax assessment:** The tax officer views the tax declaration; verifies all the identification details of the taxpayer; crosschecks the income and exemptions by reviewing submissions by employer and external databases, and previous years filings; applies the tax rate to calculate the tax due; verifies if tax credits apply; transfers the return to collection or holds the return if some of the deductions are not admissible; and adjusts the line items. Online self-service is necessary in case the data is acquired electronically, but they could be scanned from paper forms, or entered manually. Taxpayer registration allows for verification of the identity of the taxpayer and retrieves information from other taxpayers that are related to him/her. Return processing is at the core of the assessment, because it applies all the rules for calculating the amount due and exemptions. Taxpayer accounting helps review the history of filing and is then updated once the return is validated. The billing and collection department receives the validated return for billing. Case management guides the tax officer through the activities and reports on their results. Security is necessary to make sure the tax officer can access the appropriate data, but also to make sure he cannot change fields that he is not allowed to.
- **Delinquent collection:** The collection officer navigates to the case in-box to identify his or her daily tasks, and selects through yield determination algorithms the accounts that are potentially high-yield. He or she reviews the tax return forms and billing forms, searches for relationships with other cases through the name of the taxpayer, and discovers that the same taxpayer also

has an outstanding debt for corporate taxes. The debts are consolidated, and interests are calculated on the total amount of debt, which comes over the limit for asset seizure, and requires sending a letter to be sent to the taxpayer and to his bank. Online self-service might be used to offer the taxpayer the ability to submit payments online and review the status of the delinquent account. Taxpayer registration, taxpayer accounting and return processing are all necessary to review and validate the existing information for individual taxpayers, tax accounts and relationships across accounts. The billing and collection functionalities are essential to consolidate debts, calculate penalties and issue letters. The case management components guide the collection officers through the activities and report on their results. Security is necessary to make sure the collection officer can access the appropriate data, but also to make sure he cannot change fields that he is not allowed to.

- **Revenue administration:** The tax commissioner (or a high-level executive) reviews the amount of assessed and collected revenue weekly, compares them against targets for the year, compares them across tax types, and drills down to identify causes of gaps. Revenue accounting is the most important capability, because it enables the commissioner to run all reports, apportion revenue and verify reconciliation with the general ledger. Taxpayer accounting is useful in case the commissioner wants to drill down on the data of large business or individual taxpayers. Case management helps the commissioner walk through his priority of daily tasks. Security is necessary to make sure the commissioner can access the appropriate data, but also to make sure he cannot change fields that he is not allowed to.

Table 1. Weighting for Critical Capabilities in Use Cases

Critical Product Capabilities	Overall	Taxpayer Filing	Tax Assessment	Delinquent Collection	Revenue Administration
Online Self-Service	10.0%	35.0%	5.0%	2.0%	0.0%
Taxpayer Registration	10.0%	20.0%	10.0%	7.0%	0.0%
Return Processing	15.0%	10.0%	40.0%	6.0%	0.0%
Taxpayer Accounting	10.0%	5.0%	15.0%	15.0%	10.0%
Billing and Collection	20.0%	0.0%	5.0%	40.0%	0.0%
Revenue Accounting	15.0%	0.0%	0.0%	0.0%	70.0%
Case Management	10.0%	5.0%	15.0%	25.0%	10.0%
Security	10.0%	25.0%	10.0%	5.0%	10.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Gartner (December 2010)

Inclusion Criteria

The COTS product must be in production in at least one federal/central, or state/provincial government tax agency as of August 2010, and the current version of the product must provide at least half of the functional capabilities listed in Table 1 out of the box.

Critical Capabilities Rating

Each of the products that meet our inclusion criteria has been evaluated on the critical capabilities on a scale from 1.0 to 5.0 (see Table 2).

Table 2. Product Rating on Critical Capabilities

Product Rating	Bull	Crown Agents/ TRIPS	Fast Enterprises/ GenTax	Oracle/Enterprise Taxation and Policy Management	RSI/ Revenue Premier	SAP/Tax and Revenue Man- agement	TCS/ Digi- GOV	TCS/Tax Mantra
Online Self-Service	2.5	3.0	3.5	4.0	3.5	3.5	3.5	3.5
Taxpayer Registration	3.5	4.0	4.5	3.5	3.5	3.5	3.5	4.0
Return Processing	3.5	3.5	4.0	3.5	3.5	3.5	3.5	3.5
Taxpayer Accounting	4.0	4.0	4.5	3.5	4.5	4.5	4.0	4.0
Billing and Collection	4.0	4.0	4.5	4.0	3.0	4.0	3.0	4.0
Revenue Accounting	4.0	4.5	4.0	4.0	3.0	4.5	3.5	3.5
Case Management	4.0	3.5	4.5	4.0	4.5	4.0	4.0	4.0
Security	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5

Source: Gartner (December 2010)

Critical capabilities are attributes that differentiate products in a class in terms of their quality and performance. Gartner recommends that users consider critical capabilities important criteria for acquisition decisions. This methodology requires users to identify the critical capabilities for a class of products. Each capability is then weighted in terms of its relative importance overall, as well as for specific product use cases. (The sum of weights across capabilities equals 100%.) Next, products are rated in terms of how well they achieve each of the critical capabilities. A score that summarizes how well they meet the critical capabilities overall, and for each use case, is then calculated for each product.

Ratings and summary scores range from 1.0 to 5.0:

- 1 = Poor: Most or all the defined requirements are not achieved.
- 2 = Fair: Some requirements are not achieved.
- 3 = Good: Meets requirements.
- 4 = Excellent: Meets or exceeds some requirements.
- 5 = Outstanding: Significantly exceeds requirements.

Ratings are the result of three sources of information:

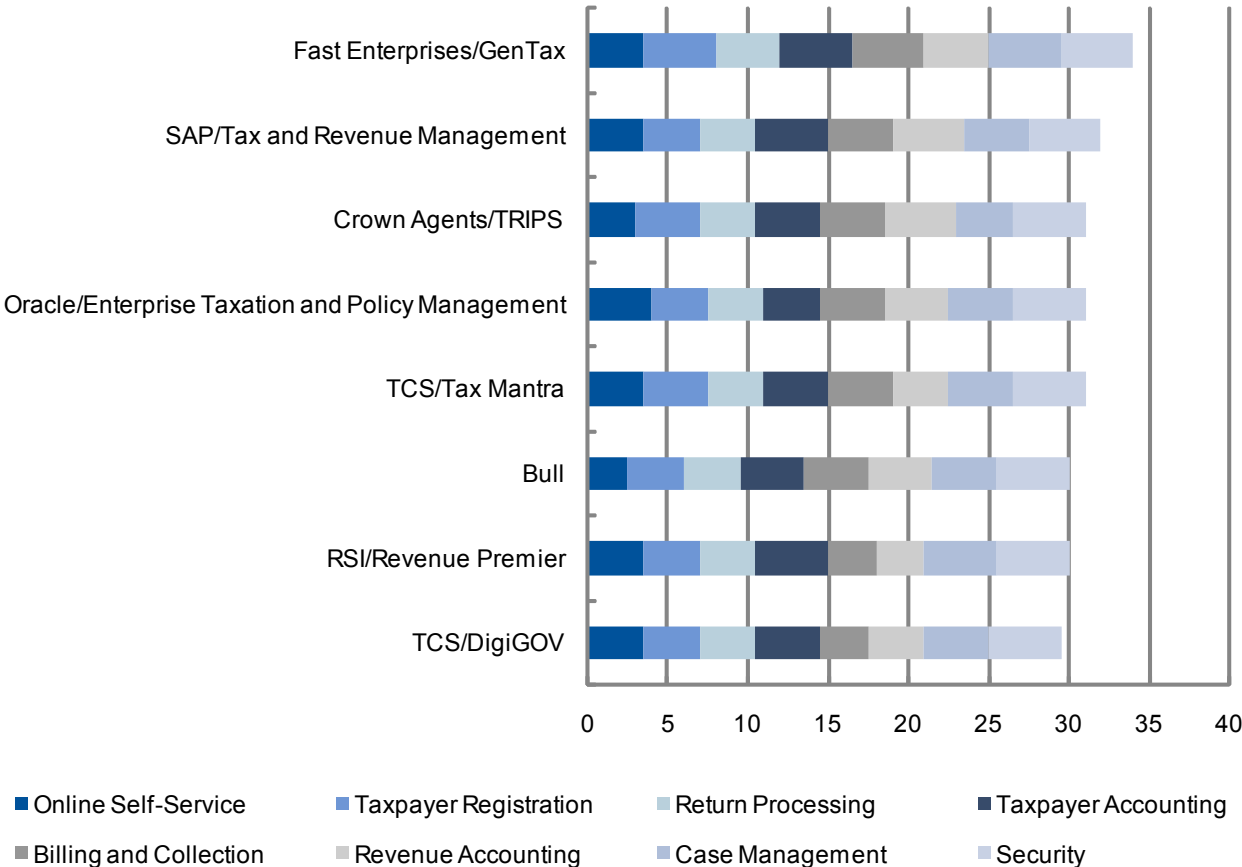
- A questionnaire is filled out by each vendor to indicate whether certain product functionalities are available out of the box in the current version, or if they require configurations, customization or partner components. Vendors are asked to indicate how long that functionality has been available.
- Vendors are interviewed to dig deeper into some functionalities and the vendors' overall product road maps.
- Gartner interviews at least two reference customers for each vendor. For RSI and Crown Agents, only one interview could be done.

The ratings refer to Gartner's analysis of current product versions and do not represent opinions on future releases, although some of those are discussed in the qualitative profiles for each vendor.

To determine an overall score for each product in the use cases (see Figure 1), the ratings in Table 2 are multiplied by the weightings shown in Table 1. These scores are shown in Table 3, which also provides our assessment of the viability of each product.

Figure 1. Overall Score for Each Vendor's Product Based on the Nonweighted Score for Each Critical Capability

Product Rating Chart



Source: Gartner (December 2010)

Table 3. Product Score in Use Cases

Use Cases	Bull	Crown Agents/ TRIPS	Fast Enterprises/ GenTax	Oracle/Enterprise Taxation and Policy Management	RSI/ Revenue Premier	SAP/Tax and Revenue Man- agement	TCS/ Digi- GOV	TCS/Tax Mantra
Overall	3.8	3.9	4.3	3.9	3.6	4.0	3.6	3.9
Taxpayer Filing	3.5	3.7	4.1	4.0	3.9	3.8	3.8	3.9
Tax Assessment	3.7	3.7	4.3	3.7	3.9	3.9	3.7	3.8
Delinquent Collection	3.9	3.9	4.5	3.9	3.8	4.0	3.6	4.0
Revenue Administration	4.1	4.4	4.2	4.0	3.5	4.5	3.7	3.7
Product Viability	Good	Good	Excellent	Excellent	Good	Excellent	Good	Good

Source: Gartner (December 2010)

Product viability is our assessment of the vendor's strategy, and its ability to enhance and support a product throughout its expected life cycle. It is not an evaluation of the vendor as a whole. Each product is rated on a five-point scale, ranging from poor to outstanding. Four major areas are considered:

- Strategy includes how a vendor's strategy for a particular product fits in relation to its other product lines, market direction and its business overall.
- Support includes the quality of technical and account support, and customer experiences for that product.
- Execution considers a vendor's structure and processes for sales, marketing, pricing and deal management.
- Investment considers the vendor's financial health and the likelihood of the individual business unit responsible for a product to continue investing in it.

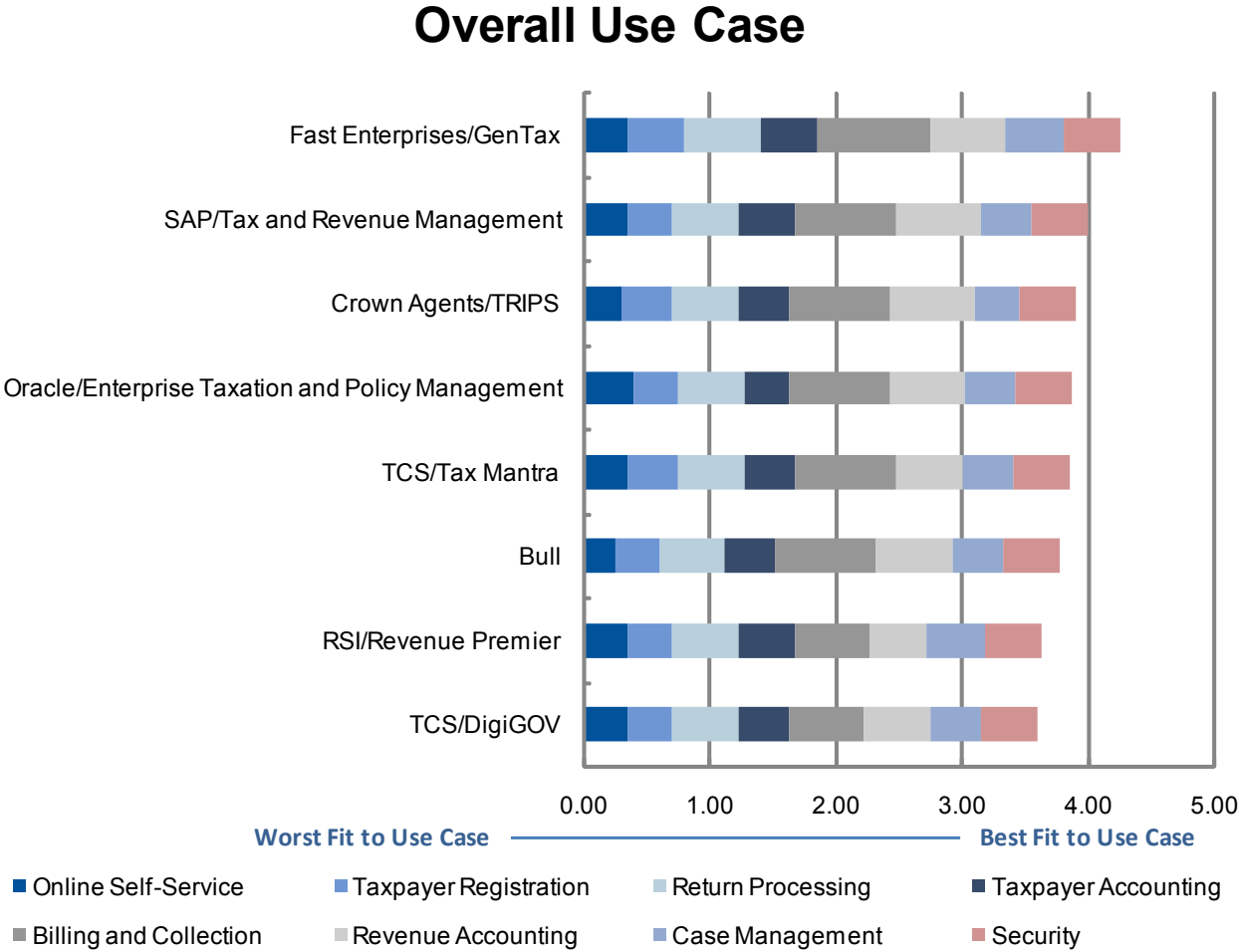
Each area is scored on a 1 (poor) to 5 (excellent) scale. Ratings of the four areas were summed up to define the summary scoring:

- Sum of four areas from 4 to 6 = poor product viability
- Sum of four areas from 7 to 10 = fair product viability
- Sum of four areas from 11 to 14 = good product viability
- Sum of four areas from 15 to 17 = excellent product viability
- Sum of four areas from 18 to 20 = outstanding product viability

Table 3 only provides a summary assessment of those four areas. Readers should look at the qualitative comments provided in the following section to better understand the vendor's ability to provide service support directly or through partners, the market segments they serve and the technical requirements. Product viability is distinct from the critical capability scores for each product. It is our assessment of the vendor's strategy and its ability to enhance and support a product over its expected life cycle.

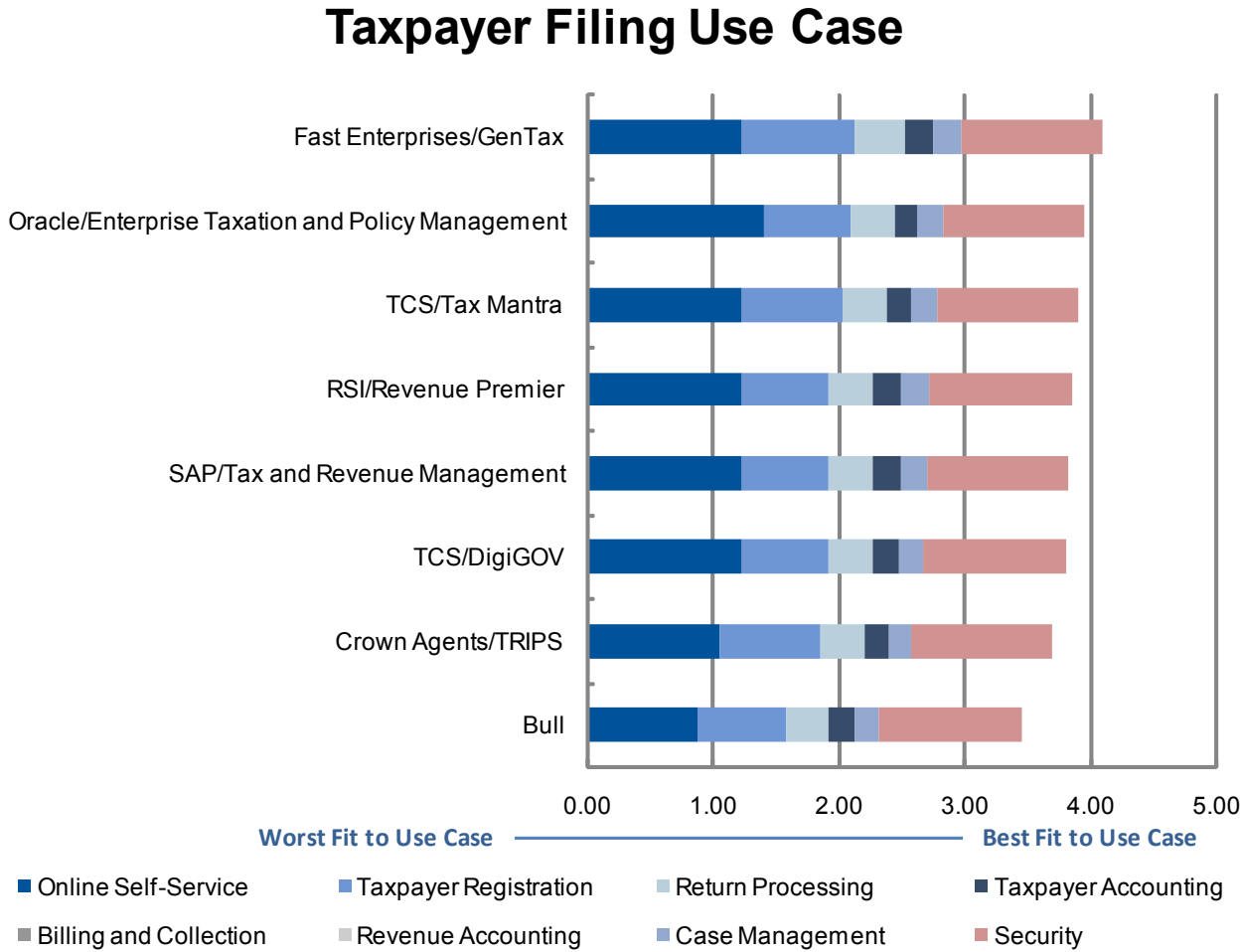
The weighted capabilities scores for all use cases (see Figures 2 through 6) are displayed as components of the overall score.

Figure 2. Vendors' Product Scores for Overall Use Case



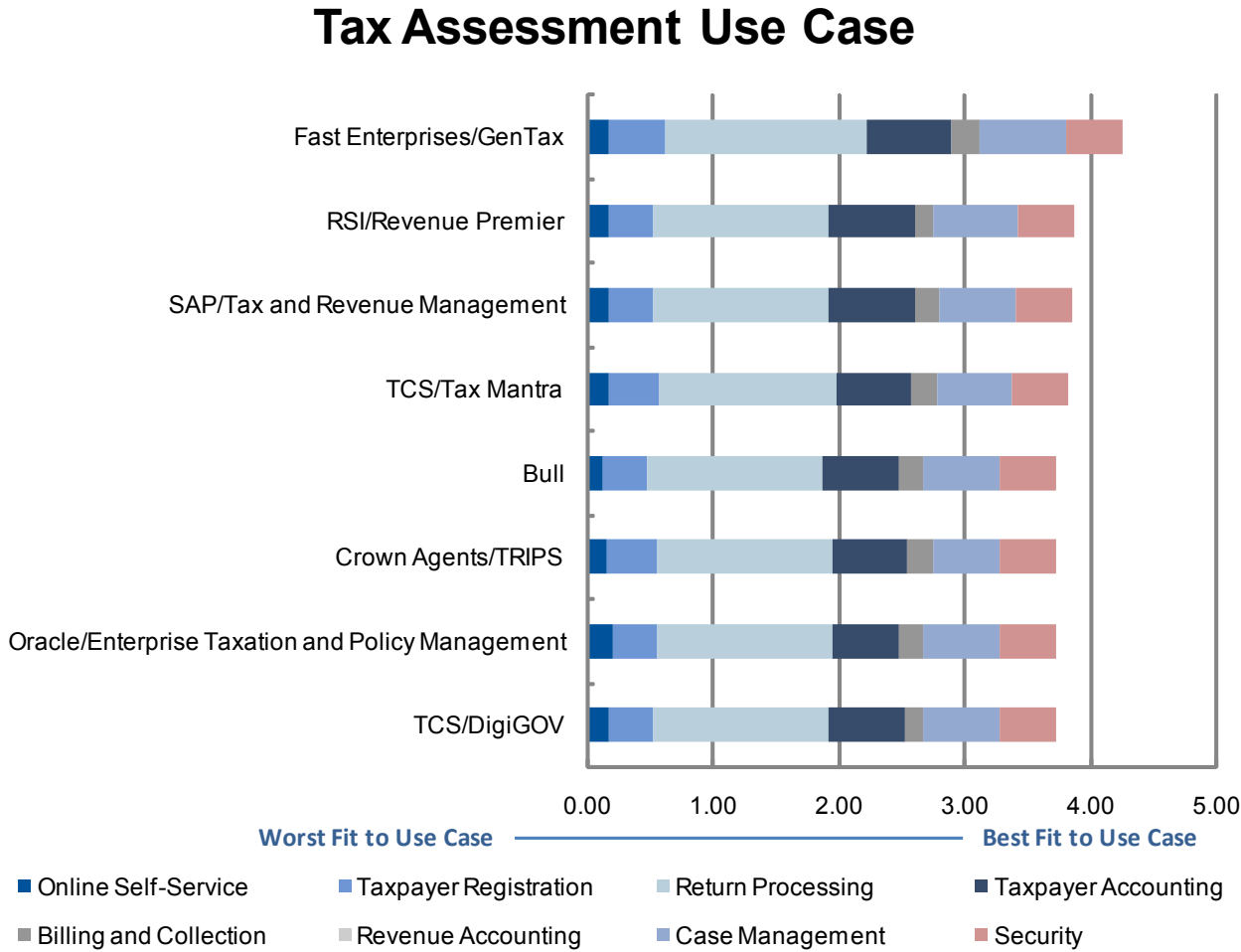
Source: Gartner (December 2010)

Figure 3. Vendors' Product Scores for Taxpayer Filing Use Case



Source: Gartner (December 2010)

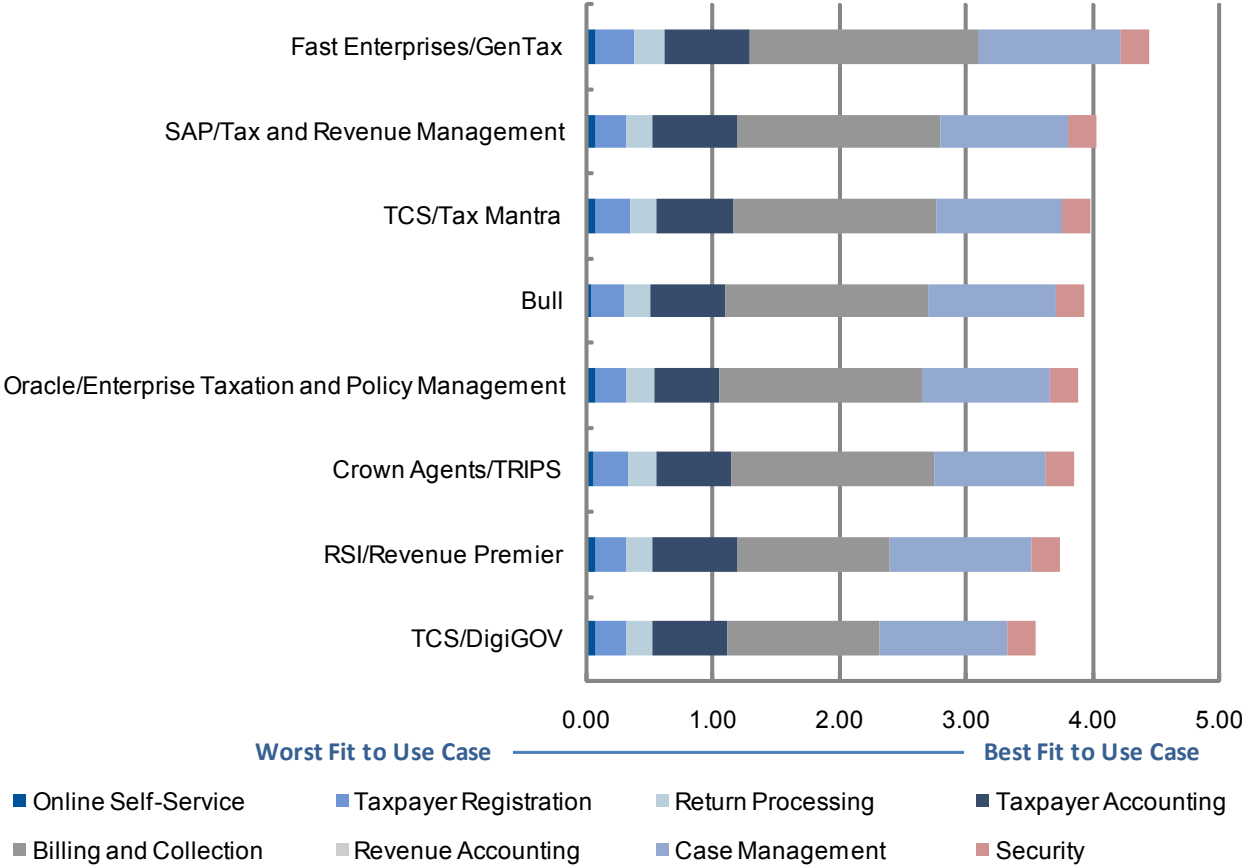
Figure 4. Vendors' Product Scores for Tax Assessment Use Case



Source: Gartner (December 2010)

Figure 5. Vendors' Product Scores for Delinquent Collection Use Case

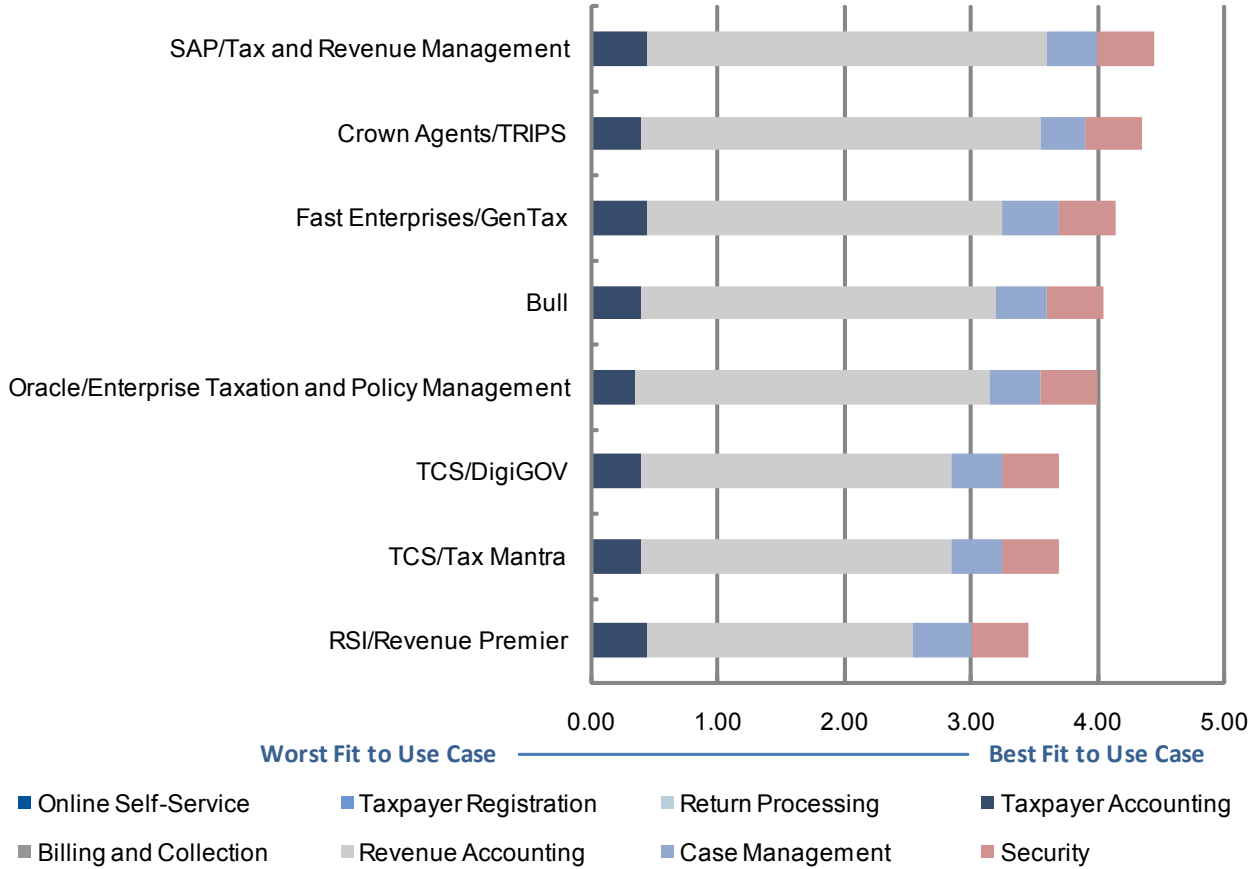
Delinquent Collection Use Case



Source: Gartner (December 2010)

Figure 6. Vendors' Product Scores for Revenue Administration Use Case

Revenue Administration Use Case



Source: Gartner (December 2010)

Vendors

Bull

Company background: Bull is a French IT services provider and hardware manufacturer of high-end servers (Bullx) and in cooperation with IBM for Unix servers. Bull expanded its service business during the past decade to more than 40% of revenue. In 2009, the company revenue was €1.1 billion — of which, 52% was generated in France. Bull had approximately 7,700 employees in 2009. The public-sector business unit, which encompasses government, healthcare and education, accounts for more than 40% of the total company revenue. The service business covers application

implementations, application and infrastructure consulting, outsourcing, and custom-made software development.

Products: Bull's e-ris, along with its Customs partner-product, e-biscus, are managed and implemented by Bull's Tax and Customs Worldwide Business Unit. e-ris is the fourth evolution of tax applications developed within Bull, and it is fully Web-based. e-ris and the Bull FlexStudio development suite provide a COTS tax administration solution that addresses all tax administration revenue management needs with dedicated modules for taxpayer registration; returns processing, assessments and compliance using an assessment rule engine; taxpayer and revenue accounting, payment processing, adjustments and repayment plans; case management for enforcement, objections, appeals and taxpayer audits; objections and appeals; audit rule engine; FlexFlow for workflow configuration and management; FlexForms for return form customization; and FlexRules for configuration of assessment and risk rule engines. The FlexStudio SOA has been used to interface with ERP products, identity and access management products, as well as to existing portals. XML Web Services are used to interface with legacy CRM applications or for other communication channels.

Product developments in the past two years include, for example, collection and case management capabilities, such as post audit adjustments, matching of taxpayer data for audit selection, and scanning and imaging of returns, which now use a bar code and index them, but require third-party document management capabilities to index, archive and retrieve documents. The product is designed for the Anglo-Saxon/Commonwealth tax regime model. Thus, it may require customization if deployed outside of this domain — particularly for taxpayer registration and relationship management activities, and return processing activities. The focus on emerging countries has limited the development of out-of-the-box alternative taxpayer interaction channels, such as online, interactive voice response (IVR) and third-party file transfer, which are requirements in many Western countries.

In particular, Bull has worked with countries where a citizen portal was already up and running, and the revenue authority was one of the recipients of the portal service. Therefore, Bull has decided not to provide a full online filing capability as part of the e-ris package, but has implemented FlexStudio technologies to interact with existing online portal services through the use of XML Web services for connection to external systems/interfaces and HTTP/S service for portal integration. Once integrated to the portal, e-ris enables online filing of returns, requests and objections, as well as taxpayer account querying.

Customer base: Bull focuses on midsize emerging countries. The e-ris customer base includes Namibia, Zambia, Saudi Arabia, Morocco and Egypt. Other countries, such as Botswana, Rwanda and Ethiopia, use previous versions of the product, or specific modules for taxpayer registration or billing and collection, but not the entire suite.

Go-to-market strategy: 100% of sales for e-ris are handled by Bull, with a dedicated team of four people that ensures industry expertise, but limits the geographical reach compared with other competitors. Business development in the emerging market is supported by strong relationships with international aid institutions, such as the World Bank, the International Monetary Fund and the U.S. Agency for International Development (USAID). Bull has a team that directly provides product configuration, implementation and support. This team is of relatively limited size and allows Bull to

manage no more than two implementations at a time. It is important to note that Bull has an offshore center based in China, which provides a low-cost option for solution customization and support after the go-live phase, but requires careful coordination to ensure that all communication of business requirements are well-understood. Partnerships with other global IT suppliers, such as IBM, Accenture and Ernst & Young, are established on a project-by-project basis, depending on project scope, client requirements and complementary products used, but there are no global partner certification programs.

Technical architecture: e-ris is based on Java EE. Bull and IBM partner on AIX and AIX-based servers. Thus, e-ris is optimized for performance on the IBM/Bull range of servers, AIX operating system, WebSphere and IBM DB2. A partnership with Oracle guarantees e-ris compatibility with the Oracle database and Fusion/WebLogic middleware. Bull's services offer a wide range of open software services to support jurisdictions that want an open-source operating system and application server stack. The product is not architected to support application hosting or SaaS, and Bull does not plan to invest in such a development in the next 18 to 24 months.

Bull's ITS offering's strengths and challenges include:

- *Strengths:* Its SOA is easily configured, and is compatible with multiple operating systems, database and application server platforms. The Common platform for the tax (e-ris) and customs (e-biscus) applications meets the requirements of countries that want an integrated solution. Bull has expertise in the emerging countries' government sector, and in tax and revenue, in particular. Bull's costs are lower compared with other competitors.
- *Challenges:* Bull has no presence in tax agencies with more than 10 million taxpayer accounts. Its form and workflow templates are designed for the Anglo-Saxon/Commonwealth tax regime model. Thus, they may require customization if deployed outside this domain. Bull has a small business development and implementation team compared with competitors, which limits its ability to support many customers.

Crown Agents

Company background: Crown Agents offers supply chain management, public finance management, and banking and investment services to clients in 110 countries. In 2009, it recorded \$183 million in revenue and employed approximately 1,000 people; 90% of Crown Agents' revenue comes from public-sector organizations in emerging countries.

Products: TRIPS 2.0, the most recent version of Crown Agents' revenue solution, combines the administration of VAT, goods and services taxes, direct taxes and other duties, permits, and licenses in an integrated taxpayer ledger. TRIPS 2.0 functionalities include taxpayer portal and self-service, taxpayer registrations, return processing, collection and refunds, taxpayer accounting, revenue accounting, compliance and enforcement, audit, information management and business intelligence, case management, and risk profiling. TRIPS 2.0 also provides functionalities that support the processes of customs agencies. Revenue accounting is stronger compared with other competitors when TRIPS 2.0 is implemented in conjunction with Oracle E-Business Suite, because the common database and application server platform enable a seamless integration between the

two products, which require paying license and maintenance fees for two separate products. Alternative channels for taxpayer relationship management, such as IVR or telephone, require additional configurations and integration with third-party products.

Customer base: Crown Agents' tax products (including TRIPS and the previous generations of products) have been implemented in approximately 50 emerging countries; 60% of those customers used Crown Agents' solutions to modernize applications across different tax types (up to 20), and 40% of them used Crown Agents' products for their customs departments. Those revenue agencies migrated from paper-based or very basic IT solutions to an ITS across multiple tax types, including corporate and personal income; VATs; excises; stamp duties; and property, capital gain and airport taxes. It must be noted that those customers are midsize, with about as many with only the Department of Revenue of the Philippines handling more than 20 million taxpayers. This customer is still in the testing phase and is expected to go live in 2011.

Go-to-market strategy: Crown Agents has a staff of more than 150 people located across 36 countries who are in charge of business development, product configuration, customization and implementation, and after-sales support. The vast geographical span of activities sometimes overstretching resources — particularly in the product support phase, when changes and new tests are required after the initial project is closed. Crown Agents has a global partnership with Oracle that extends to Oracle consulting for implementation services. In the past two years, Crown Agents has expanded its network of local partners that are used on a project-by-project basis to support development, deployment and change management activities. Examples of partners include Indra Sistemas and Daewoo Information Technology. Crown Agents' long-term experience with international financial institutions, such as the World Bank and USAID, is a plus in emerging markets. Pricing for TRIPS licenses follows the Oracle database pricing structure per named user or per processor. Implementations of TRIPS include agencies collecting revenue from one to two million.

Technical architecture: Crown Agents has developed TRIPS based on Oracle database and Oracle Application Server technology. Nevertheless, the solution is compatible with IBM databases, and runs on Windows and Unix server operating systems. TRIPS' current version uses technologies associated with SOA, including Web services, service bus and business process management (Business Process Execution Language [BPEL]), and provides a suite of services that can be reused as part of a corporate SOA strategy. This architecture gives TRIPS the capability to wrap existing services in an organization and reuse them (for example, wrapping an existing HR system that provides services related to tax officers). TRIPS leverages the Oracle technology stack to provide out-of-the-box legacy integration capabilities (such as file-based batch support for XML, COBOL copybooks, MQSeries and Oracle Advanced Queuing support). The product can be delivered through hosting, but a SaaS version is not yet available.

Crown Agents' ITS offering's strengths and challenges include:

- *Strengths:* The TRIPS application suite was built on purpose for tax and customs agencies of emerging countries. TRIPS provides functionalities for revenue management of tax and customs, which enables integration on a single platform in case a single authority runs both. Crown Agents is well-connected with international lending institutions, and provides a range of other financial and supply chain services that emerging countries can harness. The architecture,

which is built on Oracle technology, ensures a good degree of scalability. Its offering is lower in cost compared with other competitors.

- *Challenges:* Crown Agents is expected to go live with the first implementation of tax systems that deal with more than 10 million registered taxpayers in 2011. It primarily relies on internal service capabilities, which may be an issue in very large implementations, and, in general, in case of quick-fix maintenance/help desk calls, because Crown Agents' professionals are often deployed in remote locations. Primary reliance on Oracle technologies may generate a need for additional investment and time when there is a need to integrate with architectures based on other products.

Fast Enterprises

Company background: Fast Enterprises has 300 employees who are all dedicated to the tax and revenue industry. Its revenue is approximately \$100 million, and it has offices in the U.S. and Canada. The company develops and sells only one product, GenTax, which is a COTS software package for government tax and revenue agencies.

Products: Fast Enterprises started to develop GenTax in 1997. The GenTax product suite provides integrated tax capabilities, such as customer and account registration, return processing, financial management, workflow, reporting and analysis, taxpayer access point for Internet self-service and a set of compliance capabilities, such as data warehouse, discovery and lead management. Fast Enterprises' sole focus on this market ensures that the product has equal or better capabilities than its competitors in terms of forms and workflows that can be easily configured to meet business requirements of taxpayer accounting, billing and collection, case management, and, in particular, return processing. It must be noted that Fast Enterprises had developed product functionality and templates primarily for the North American market. Thus, implementation in other regions might require customization — for example, in Europe, where some countries use an agency-assessed process for individual income tax, instead of a self-assessed process.

The taxpayer access point is an additional module (not part of the core GenTax suite), because most state governments have traditionally used custom-developed e-filing capabilities; however, a number of Fast Enterprises' customers are buying and implementing this additional module, which offers traditional filing and payment capabilities, but also the ability to view and edit returns that were initially submitted in paper forms, and to view consolidated account balances. Revenue accounting capabilities are not as sophisticated as those of ERP-based products, but Fast Enterprises' customers are, on average, satisfied with them, because they provide tax-specific functionalities, such as the ability to account for late returns up to five days after the end of the accounting period and the ability to apportion money across different jurisdictions (for example, counties, school districts and hospitals).

Customer base: Twenty-two revenue agencies — 15 U.S. states, three Canadian provinces, two U.S. counties and one city, and the Inland Revenue of the Republic of Trinidad and Tobago — currently use GenTax. Most recently, Fast Enterprises won two new contracts with U.S. state governments. Fast Enterprises estimates that more than 50 million accounts of approximately 530 account types are administered by more than 14,700 revenue agency employees on a daily basis

with GenTax. The largest implementation is at the Illinois Department of Revenue, with 12.4 million taxpayers and 12.5 million active accounts of 24 types.

Go-to-market strategy: Fast Enterprises has more than 300 employees dedicated to support client implementations of GenTax and maintenance; however, the vendor sometimes collaborates with local partners, such as IBM, Quinn David & Associates, North Highland and IDL Solutions. All sales opportunities are developed directly by Fast Enterprises' account managers and executives. The lack of formalized partnerships with global system integrators may be a barrier to Fast Enterprises' expansion strategy into national government revenue agencies. Partnering with system integrators could strengthen Fast Enterprises' ability to adapt to local business requirements, scale more rapidly for large projects overseas, and design and build interfaces to legacy systems that exist in a large number of national tax agencies.

On the other hand, the tight control on the combination of product and implementation methodology has proved successful with existing clients, because it helped Fast Enterprises deliver on time and on budget, and to minimize customization, hence TCO, especially with the most recent versions of the product. As part of the maintenance contract, Fast Enterprises provides continued on-site support after the product goes live (typically between two and five people, depending on the size of the implementation). Thus, agencies that want to buy GenTax need to factor in a continuous collaboration for product support, instead of a full handoff after it goes live.

Technical architecture: GenTax version 8 is built on Microsoft .NET Framework 3.5, Microsoft Windows Presentation Foundation (WPF), Microsoft Silverlight and Windows 7. GenTax is capable of interfacing using XML, secure FTP, Web services and SOA. GenTax data warehouse can be deployed on SQL Server, Oracle, DB2 or Teradata. The GenTax suite approach, based on .NET, allows for ease of configuration and implementation, and integrity of data and processes, but also requires a full rip-and-replace approach with legacy systems. In fact, some agencies have selected competitor products, because they wanted a more modular approach — for example, because they wanted more flexibility in the data modeling approach to use a variety of case management and analytical tools. One customer is using the taxpayer access module as SaaS.

Fast Enterprises' ITS offering's strengths and challenges include:

- **Strengths:** It offers core tax processing, collection and accounting functional capabilities. It has strong expertise in U.S. state and Canadian provincial tax systems. Fast Enterprises' integrated product suite and the strength of its implementation methodology enable the product to be deployed on time and on budget. It offers lower-cost licensing and maintenance compared with Oracle and SAP.
- **Challenges:** Knowledge transfer requires strong technical and project management expertise due to the breadth of modules included in the suite. Investments to grow outside of North America and Latin America could stretch resources in the early stages of that process, especially if no partnerships are set up with system integrators. Its product suite architecture does not provide the same flexibility as competitors to take a modular approach to legacy modernization.

Oracle

Company background: Headquartered in Redwood Shores, California, Oracle is one of the largest global software vendors, with revenue of \$26 billion, and approximately 105,000 employees worldwide for the fiscal year ending 31 May 2010. In 2010, Oracle completed the acquisition of global IT vendor Sun Microsystems, which added significant hardware, system infrastructure software and middleware to the broad Oracle portfolio (see "Vendor Rating: Oracle"). Gartner estimates that between 10% and 15% of Oracle's revenue was generated from the government sector.

Products: In 2006, Oracle acquired SPL WorldGroup, a provider of revenue and operations management software for utilities. The acquisition was the real starting point for developing a COTS product that is fully dedicated to tax and revenue departments. The current version of the product, Oracle Enterprise Taxation and Policy Management v.2.2.0, includes the following capabilities: taxpayer registration and relationship management; tax return processing, including tax form definition, validation and exception handling; remittance processing for receiving, tracking, applying and managing taxpayers' payments; taxpayer accounting; revenue accounting; collection and compliance enforcement; and case management for audit processes. The product is part of a broader solution framework that combines Oracle Enterprise Taxation and Policy Management, which handles the core tax processes, Oracle Siebel, which is used for taxpayer relationship management, including multichannel processes (such as online tax filing), Oracle Policy Automation business rule engine, Oracle Application Integration Architecture to allow interfacing the various components, Oracle Master Data Management as the foundation for integration and consolidation of taxpayer data and management of relationships across tax accounts, and Oracle Fusion Middleware.

It is important to note that not all existing Oracle tax agency customers have purchased all components, but most of them have the core Enterprise Taxation and Policy Management product and Oracle Policy Automation. The early versions of the product, 2.1.0 and 2.1.5, were immature in terms of templates supporting return processing for specific tax types, case management for audit, and revenue accounting. Collection capabilities were fairly mature with minor exceptions, such as penalty forecasting. As a result, early adopters had to rely on the tax-specific expertise of Oracle partners, such as HP and CGI, to customize the product.

In the past three years, Oracle has invested significantly to incorporate all the innovations that customers asked for. Thus, Gartner recommends users of the latest versions, such as 2.2.0, to minimize customization — for instance, by using Oracle Siebel and Oracle Policy Automation for case management, rather than trying to customize the core Enterprise Taxation and Policy Management product. For those enterprises that are considering the solution, or negotiating the contract, it is advisable to wait for the next release of Oracle Enterprise Taxation and Policy Management 2.3.0, which Gartner expects to be available in 2011. The new version should provide new capabilities — for instance, to make it easier to extract data from the transactional return processing system to create, track and report audit treatment streams.

Along with the new version of the product, Oracle plans to release Oracle Tax Web Self-Service 1.0, as a stand-alone module, and Oracle Tax BI 1.0, which is aimed to provide broader capabilities for

operational reporting and key performance indicators tracking. Those enterprises that are running old versions of the product and have heavily customized it should carefully assess the trade-off between implementing service packs for those versions and migrating to version 2.3.0, because the time and cost of implementing those service packs might outweigh the cost of a major upgrade.

Customer base: The Dutch Tax Administration, State of Vermont and State of Kentucky are the Oracle customers that are currently live with the product. Gartner has talked to two other U.S. state departments of revenue that are implementing the system. New Zealand Inland Revenue is the most recent Oracle customer win, but it is implementing the solution for student loan management. The program is to establish an architecture of reusable services that are planned to be progressively extended to other tax and welfare programs for which the agency is responsible. This latest example is an indication that the Oracle product is particularly suitable for revenue agencies that have had their remit expanded to include welfare programs, because, compared with more-specific products, such as GenTax, it enables a more modular approach.

Go-to-market strategy: Indirect sales are the primary channel for Oracle, which continues to solidify relationships with key system integrators at the certified advantage partner level. Partners from a tax and revenue perspective include, but are not limited to, Accenture, Capgemini, Wipro, CGI, TCS and HP. Investment in product development has also resulted in expansion of a core group of Oracle consultants that have acquired and grown tax expertise, and, thus, can support product configuration and interfacing. These investments included the creation of a Tax Reference Model that describes the key process supported by the base product, and that is used as the basis for fit-gap analysis and product configuration. It is important to note that the current and future versions of the Oracle Enterprise Taxation and Policy Management product are offered at a price that includes both the traditional Enterprise Taxation Management application and use of Oracle Policy Automation, although the latter is restricted to use within the Enterprise Taxation and Policy Management architecture.

Technical architecture: The product runs on most common server operating systems, databases and client operating systems. Oracle WebLogic is the recommended application server, but the new versions of the product run equally well on WebSphere. Oracle Enterprise Taxation and Policy Management is a Java EE application and is SOA-enabled. Gartner expects that Oracle Enterprise Taxation and Policy Management will converge into the Fusion Application platform, but only during the next five to 10 years, not in the short term.

Oracle is engaged in discussions with partners and customers in respect to Tax XML and SBRL to use these standards to expose business objects, such as taxpayer, taxpayer obligation, taxpayer account and taxpayer case, through a Web services layer. Oracle supports cloud infrastructures. The recently announced Oracle Exalogic Elastic Cloud combines Oracle WebLogic Suite software with Oracle-Sun's hardware to deliver the foundation for government jurisdictions that plan to migrate to a private cloud infrastructure. However, Oracle Enterprise Taxation and Policy Management is not available as SaaS.

Oracle's ITS offering's strengths and challenges include:

- *Strengths:* Its SOA enables integration with external systems and implementation of the solution with a modular approach to reuse services across tax programs and welfare disbursement

programs. Oracle combines Enterprise Taxation and Policy Management with best-in-class Oracle Siebel CRM and the Oracle Policy Automation rule engine. It has partnerships with top-tier system integrators. Oracle is able to run on most common hardware and system software architectures.

- *Challenges:* Oracle has a limited number of live customers. There are large amounts of licensing and complex licensing for agencies that decide to implement multiple Oracle products to optimize capabilities beyond Enterprise Taxation and Policy Management. Negotiation of enterprise licensing agreements should be considered to allow more agility. Oracle is in the early stages of tax-return-processing capabilities outside the U.S. state government market.

RSI

Company background: RSI was established in 1996 and has experienced revenue growth ever since. It employs 175 professionals, and offers tax compliance and revenue management software solutions and services for U.S. government agencies. More than 80% of RSI's revenue comes from U.S. state tax departments.

Products: RSI built expertise in the tax compliance area, which led to the development of a suite of software products and four practices of consulting services: data warehousing and business intelligence, audit management, decision analytics, and accounts receivable management. During the past 15 years, RSI has continuously invested to develop its consulting and system integration capabilities to support revenue management, system legacy modernization, legacy support, implementation of custom, transfer or COTS ITS products, and implementation of custom or COTS for unemployment insurance systems.

In a final step to provide an end-to-end offering for tax agencies, RSI started to design and develop an integrated tax processing module in cooperation with the state of South Carolina in 2006. In 2009, that module became a full-fledged product and is part of RSI's Revenue Premier offering. The current version of Revenue Premier, 3.0, is composed of four primary modules and a set of shared services that, together, provide a functionally and technically rich integrated revenue management product. The four primary modules are Integrated Tax Processor, Collections Manager, Portfolio Warehouse and Audit Manager. The Integrated Tax Processor includes functional capabilities for taxpayer portal, entity identification, taxpayer accounting, channel management, returns processing and revenue accounting. Taxpayer accounting must be considered the most comprehensive feature of the Integrated Tax Processor module, because it supports any tax type, penalty and interest type. It allows separate revenue allocation among tax, penalty and interest, and money is tracked through online transfer activity. Design of the overall solution is SOA-based and underpinned by a business rule engine that allows customers to design and understand the impact of changes in business logic.

Tax discovery, data warehousing, audit management and case management to optimize collections should still be considered as the core competencies of the Revenue Premier product suite, although RSI has matured ITS consulting and implementation expertise for many years. Agencies that are considering acquiring the Integrated Tax Processor module should consider that it is new to the

market. Additional customization may be required to further develop some key capabilities, such as online tax return filing, managing enforced compliance and revenue account reporting.

Customer base: RSI has 38 customers among U.S. state government agencies. Twelve are using Revenue Premier or older product versions. At present, only South Carolina has implemented the Integrated Tax Processor module. In 2009 and early 2010, RSI signed new contracts or renewed business with agencies such as the Office of Tax and Revenue in Washington D.C., Maine Revenue Services, North Carolina Department of Revenue, Pennsylvania Department of Revenue, Connecticut Department of Revenue, New Mexico Taxation and Revenue Department, South Carolina Department of Revenue and Georgia Department of Revenue. One installation includes a multistate clearinghouse that contains data for more than 50 million taxpayers. RSI has no presence outside the U.S., but is conducting research to expand its market reach, starting from Canada.

Go-to-market strategy: RSI has a direct sales force of seven professionals targeting revenue, employment security and child support agencies that deal with revenue collection. RSI has delivered performance-based contracts with some of its customers to fund the initial investment and to be paid back based on the amount of additional collections that the tax agency realizes after the implementation. RSI's staff usually implements its products. RSI's Technology Division is responsible for hardware and software implementation, and RSI's Consulting Division is responsible for configuration, project management and training. RSI's solution center in Sacramento develops products and supports customers. RSI has occasionally partnered with system integrators, such as CGI, Accenture and Deloitte, but does not have exclusive arrangements.

Technical architecture: Revenue Premier is Java- and .NET-based for all service-side Web components, and .NET-based for the end-user interface. Revenue Premier runs on Windows, AIX and Linux servers; Oracle, Microsoft and IBM databases; and Tomcat and WebSphere application servers. However, RSI has accommodated other configurations of hardware, operating systems, Java Virtual Machine and relational database management system when clients require it. RSI is providing application hosting services for a custom taxpayer access solution built for a state government jurisdiction. At this time, RSI has not had demand for a version of Revenue Premier that can be delivered as SaaS.

RSI's ITS offering's strengths and challenges include:

- **Strengths:** RSI offers an integrated suite with discovery, data warehouse and case management modules that have been in production for many years. Its product is developed expressly for revenue and taxation agencies based on experience gathered through implementations of custom and transfer ITS solutions. Its service skills are entirely dedicated to tax and revenue agencies. Its SOA is complemented by prepackaged data integration templates and a widely implemented library of compliance programs for the U.S. market.
- **Challenges:** RSI is in the early stages of the Integrated Tax Processor module's life cycle as a COTS product. It's limited in its ability to service customers outside the U.S., and RSI has limited partnerships with system integrators that have implemented other ITSs.

SAP

Company background: SAP is one of the largest global software application vendors. In 2009, it generated €11.5 billion of revenue and employed 51,500 people. The Public Services Solution Management industry business unit (IBU), which serves public-sector, defense, healthcare, higher education and research clients, accounted for a little less than 7% of revenue (see "Vendor Rating: SAP").

Products: SAP has proved to be a viable provider of enterprise back-office applications, such as accounting and human capital management and procurement, to governments around the world, and more recently has increased investments to market CRM and industry-specific solutions, such as SAP Grants Management, SAP Social Services and Social Security, and SAP Tax and Revenue Management (SAP TRM). SAP TRM is based on SAP Enhancement Package 5 for SAP ERP 6.0, which provides the Public Sector Collection and Disbursement (PSCD) functionalities for taxpayer registration, return processing, collection management, and revenue accounting; SAP Customer Relationship Management 7.0, which integrates PSCD for taxpayer registration, relationship management and case management; and Taxpayer Online Services from SAP 2.0.

In addition to form-based taxes, SAP TRM supports property-based tax types and other asset-based revenue types. Tax agencies considering SAP should assume that revenue accounting and reporting functionalities are at the same level or better than any of the competitors because of the additional tools made available by BusinessObjects. They should, however, consider that SAP ERP and BusinessObjects consultants are not always aligned, which might complicate the configuration of data ETL from the transactional system (see "SAP NetWeaver Business Warehouse Customer Survey: Using SAP NetWeaver BW With Non-SAP BI Platforms"). Customers should, instead, be prepared for more time-consuming configurations, and, in some cases, customizations, for return processing for tax regimes that SAP has not dealt with before. It must be noted, however, that SAP has the widest range of tax agency customers in terms of geographical scope and levels of government of all the listed vendors, which the new releases of the product take into account.

Customer base: SAP has approximately 280 customers globally that are using the core PSCD functionalities for registration, return processing and collection. It must be noted, however, that not all those customers use PSCD for tax programs. In fact, some of those customers manage welfare disbursement programs or non-tax-related revenue programs, such as local business and individual license fee collection. Furthermore, approximately 190 of those customers are in the European local government market. Approximately 70 customers are effectively using TRM as an ITS for return processing, revenue collection and tax accounting.

Some of the TRM customers are also using the solution for audit and risk-based collection initiatives. Latest contract wins in 2010 include the Slovenian Tax Administration (DURS), the State of Pennsylvania, Zimbabwe Revenue Authority and the Ministerio de Hacienda of Costa Rica, where SAP was engaged in two previous phases of application modernization. One of the most complete end-to-end installations is live at the Office of State Revenue in Queensland/Australia. Similarly to Oracle, the breadth and depth of SAP's customer base indicate that SAP TRM is particularly suitable for revenue agencies that have had their remittance expanded to include welfare programs, because, compared with more-specific products, such as GenTax, it enables a more modular

approach. Also, a few customers that Gartner spoke with selected SAP TRM, because they already used SAP ERP for their back office, and wanted to leverage the ease of integration and existing technical skills.

Go-to-market strategy: SAP sells TRM directly and indirectly. Primary partners in this space include Accenture, Atos Origin, Capgemini, CSC Deutschland Solutions, Deloitte, Getronics, IBM, Indra, Satyam and Tatis. The latter is a key partner — not for implementation purposes, but because of its domain-specific solution for customs agencies. Thus, SAP provides a platform for those revenue authorities that need to integrate tax and customs.

Technical architecture: SAP products run on all the most common operating systems, databases and application servers. SAP supports alternative delivery models, such as application hosting, and has a live customer in Mexico. SAP TRM is not yet available as SaaS.

SAP ITS offering's strengths and challenges:

- *Strengths:* SAP offers revenue and taxpayer accounting, collection management capabilities, and an SOA-based architecture to accommodate the modular-based approach and the integration needs of complex revenue agencies. It offers global delivery and support capabilities and global partnerships with system integrators.
- *Challenges:* SAP requires time and budget to configure and sometimes customize return processing workflows, and taxpayer registration and relationship management rules that are specific to each country. Modules that originated from SAP ERP and BusinessObjects platforms for reporting require some technical expertise and strong coordination of separate teams of SAP consultants for full integration.

TCS

Company background: TCS is a global provider of IT solutions, consulting, BPO, engineering services and IT infrastructure services. In 2009, it recorded annual revenue of \$6.34 billion and employed approximately 160,000 people. The company's traditional stronghold is in the financial services industry; however, during the past 10 years, it has grown its presence in the public sector, particularly in India, the U.K. and the U.S.

Products: TCS offers two products to government revenue agencies: DigiGov (version 4), which is a solution framework that has been productized through TCS experience in building tax systems for revenue agencies at the state level in India, and Tax Mantra (version 100,000,000), which is an integrated tax revenue and license revenue management system aimed at state and local governments in the U.S. and Canada.

DigiGov provides a full set of capabilities for taxpayer registration, return intake and processing, and taxpayer and revenue accounting. Some configuration and customization are to be planned for return processing capabilities, such as accelerating returns, and auditing and tracking adjustments, and, most importantly, billing and taxpayer reporting and management of relationships across different taxpayers (for example, companies and owners).

Tax Mantra provides strong capabilities for taxpayer registration, especially for sales and use tax business registration that requires cross-checking between tax accounts and professional and business licenses. The system includes business licensing and permit processing to meet the need of clients that manage multiple license programs that are not tax-specific. Tax Mantra requires some configurations and customization for reporting and, most importantly, tax return processing functionalities, such as extending due dates. Tax Mantra has not been implemented to support individual income taxes. Thus, government agencies should consider it with care for tax programs, such as individual income taxes.

Customer base: TCS's DigiGov customer base includes 13 state departments of revenue in India. In the past three years, TCS has started to develop its tax business outside of India. Primary targets are emerging countries in Asia and Africa, where TCS won a contract with the Uganda Revenue Authority. TCS Tax Mantra's customer base includes a 1.5 million resident city, and seven cities and counties in states where the tax law assigns to local governments the responsibility to collect sales taxes and business licensing fees. TCS plans to market Tax Mantra to other state and local governments in the U.S. and Canada, but marketing, business development and product development efforts have been slow so far.

Go-to-market strategy: TCS sells only directly, and has a sales and marketing team entirely dedicated to its two tax products. The company also provides all system design, implementation and integration services through a team of approximately 200 professionals. The majority of the development team is located in India, but every project has dedicated resources that work with the customer on-site. For example, cities in Arizona that have implemented Tax Mantra had three to five TCS consultants during the entire project to support with product configuration, data migration, and implementation of the product and the infrastructure.

The remote location of the core development team requires great care in the communication of business requirements, user acceptance testing and knowledge transfer. TCS has added Tax Mantra technical, implementation and support services from the TCS Cincinnati Delivery Center that complement the India Tax Mantra product team. TCS provides end-to-end program management services for implementations that include complementary technologies. TCS partners with other vendors that provide hardware installation, technology migration or other expertise on a case-by-case basis, rather than through structured product-specific partnerships. Customers should be aware that this approach could mean more responsibility for the end user to coordinate project management tasks across several vendors.

Technical architecture: TCS tax products are SOA-based and written in Java EE, JSP, Struts and Hibernate languages. DigiGov is deployed using Oracle as the database and is piloted for porting on Ingress and DB2 databases, whereas Tax Mantra could be plugged with any database. The current implementation of Tax Mantra has Oracle and Microsoft SQL Server as the database. TCS can provide application hosting services and SaaS, but there are no live customers yet.

TCS' ITS offering's strengths and challenges include:

- *Strengths:* Its global delivery capabilities allow TCS to offer competitive pricing. It has more than 10 years of domain-specific experience in the tax market, both in India and the U.S.

- *Challenges:* TCS has limited staff experience in the tax domain outside of its two core markets. It has limited product development investments outside of its core markets. TCS lacks structured global partnerships dedicated to product implementation or support.

Recommended Reading

"The Government Tax and Revenue Domain: A Gartner Market Definition"

"Government Tax and Revenue Agencies Are at the Tipping Point of Application Modernization"

"COTS Is Becoming a Viable Option for Tax and Revenue Agencies' Application Modernization"

"A Close-Up of Four Application Vendors That Provide COTS for Government Tax Agencies"

"Tax Compliance Solutions for Government Revenue Agencies: A Gartner Market Definition"

"Tax Compliance Solutions for Government Revenue Agencies: The 2010 Business Intelligence Software Vendor Landscape"

Note 1 CRC Sogema

In addition to the companies highlighted in this research, Gartner contacted CRC Sogema, but the vendor did not respond to the survey. Established in 1984, CRC Sogema is a Canadian firm that specializes in the management of international development projects. With 25 years of experience working with developing countries, CRC Sogema offers advisory and technical assistance services and products in four fields of expertise: public finance and tax reform, financial institutions, education and training, and environment and natural resources. As part of its public finance and tax reform portfolio, CRC Sogema offers the Standard Integrated Government Tax Administration System (SIGTAS) — an integrated information system that enables governments to automate the administration of taxes and licenses.

Since 1996, SIGTAS has been implemented in 20 countries located in Africa, the Caribbean, the Middle East, Eastern Europe and Asia. SIGTAS is able to manage several facets of the tax management process, including taxpayer registration; intake of tax returns and other forms; return assessment; collection and case management, including appeals, cashing, penalties and calculation of interest and penalties; and audit. SIGTAS offers the possibility of developing interfaces with external systems, such as customs, government financial software or other government divisions. SIGTAS is primarily designed for the Anglo-Saxon/Commonwealth tax regime model and tax types, such as income taxes, VAT, sales taxes and other indirect taxes, licenses and permits (such as alcohol and professional), pay as you earn, excises, driving and motor vehicle licenses, property taxes and withholding taxes. SIGTAS can operate in three languages simultaneously.

Critical Capabilities Methodology

Critical capabilities are attributes that differentiate products in a class in terms of their quality and performance. Gartner recommends that users consider the set of critical capabilities as some of the most important criteria for acquisition decisions.

This methodology requires analysts to identify the critical capabilities for a class of products. Each capability is then weighted in terms of its relative importance overall, as well as for specific product use cases. Next, products are rated in terms of how well they achieve each of the critical capabilities. A score that summarizes how well they meet the critical capabilities overall, and for each use case, is then calculated for each product.

Ratings and summary scores range from 1.0 to 5.0:

- 1 = Poor: Most or all the defined requirements are not achieved.
- 2 = Fair: Some requirements are not achieved.
- 3 = Good: Meets requirements.
- 4 = Excellent: Meets or exceeds some requirements.
- 5 = Outstanding: Significantly exceeds requirements.

Product viability is distinct from the critical capability scores for each product. It is our assessment of the vendor's strategy and its ability to enhance and support a product over its expected life cycle; it is not an evaluation of the vendor as a whole. Four major areas are considered: strategy, support, execution and investment. Strategy includes how a vendor's strategy for a particular product fits in relation to its other product lines, its market direction and its business overall. Support includes the quality of technical and account support as well as customer experiences for that product. Execution considers a vendor's structure and processes for sales, marketing, pricing and deal management. Investment considers the vendor's financial health and the likelihood of the individual business unit responsible for a product to continue investing in it. Each product is rated on a five-point scale from poor to outstanding for each of these four areas, and it is then assigned an overall product viability rating.

The critical capabilities Gartner has selected do not represent all capabilities for any product and, therefore, may not represent those most important for a specific use situation or business objective. Clients should use a critical capabilities analysis as one of several sources of input about a product before making an acquisition decision.

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