



**envinsa**™  
*Location Platform*

Enterprise IT's New Strategic Weapon  
Driving costs down while creating value across the enterprise

The economy in the recent past and near future is perhaps a blessing in disguise for creative and resourceful IT managers. In the process of responding to the challenges of the times, they have redefined and even expanded their role.



## Envinsa™ Reduces Costs by Centralizing Bank's Platform



At a leading western states bank, an Envinsa™ system powers an ATM and branch locator service that was developed as a general purpose solution for use in any of the bank's business units. The system implements a set of operations that are accessible by any application through an XML API. The team behind this system was grounded in IT for the banking business, not GIS. They were

driven by the need to compete with the bank down the street. They realized technology could be their competitive advantage.

The process of deploying this solution began when the bank's IT team identified a serious business problem: The bank's numerous business units were paying a number of different vendors for similar capabilities, but none provided the centralized solution that the bank desired. After reviewing all of the vendors involved, Envinsa was chosen for the integration project.

The Envinsa team delivered a system that not only provided the specified functionality, but made it possible for the bank to get the system up and running in a matter

of weeks. Now, with the platform centralized as part of the bank's information "ecosystem," a number of additional applications and extensions are planned. Each business unit can take advantage of the capabilities in ways that benefit them specifically. For example, marketing will be able to analyze customer locations relative to ATM and branch locations. The call center will have easy access to information about which products are offered at which locations. And customers will be able to help themselves on the Web, through the phone and even from wireless Web-enabled handsets.

At MapInfo, we believe that, in addition to considering new technology, IS managers also must consider the corporate culture and

politics: how decisions are made; how well change is accepted; and how to get other key players to buy in. With technology changing so rapidly, it's impossible for the corporate IS staff to keep up with it all. The IS team would be much better off knowing as much as possible about their own company and the business it is engaged in. That expertise cannot be rented or acquired from the outside.

Today, the bank's system is up and running, supporting thousands of customers, enhancing quality in customer service and eliminating direct costs tied to management of multiple technologies and vendors.

Cost reduction is a key driving force in most IT departments. The ability to minimize management costs associated with IT projects is paramount. In addition, the ability to reduce the number of vendors a company must deal with for redundant technology is critical. Finally, leveraging technology across multiple business processes is going to be a big push. Envinsa fits perfectly in line with these goals, enabling organizations to fully leverage their investment across the organization and to minimize the costs of maintaining multiple, disparate systems.

As IT managers and CIOs have sought out technology investments that both save their company money while making it more successful, they have closed the performance gap that was due to synchronization issues between the business units and IT.

These professionals have begun to evaluate the cultural and information systems together in order to make better use of resources and improve direct processes tied to technology utilization. They have discovered that, if technology can be tied to the people side of the business, then both the people and the technology fulfill their promise.

These managers are responding well to very high performance expectations. They are providing systems and tools that support improved decision-making. They are finding new ways to take costs out of the operation. And they are making upgrades strategically and only where the purchases can be scaled to serve many users.

They have discovered the strategic use of IT to create value in tough economic times, proving the axiom: "What doesn't kill you, makes you stronger."

### Introducing the Envinsa Location Platform— A Shared-Cost Model for Leveraging Insight Throughout the Organization.

In many organizations, one or more departments will have incorporated location intelligence into their functionality. Dedicated, usually isolated, GIS systems, operated by specialists, provide logistics or marketing support, tourism and shopping information, census results, routing and districting information, E911 tracking and more.

Typically, these systems are outside the IS and composed of many disparate applications supported through relationships with many different vendors. With Envinsa™, this functionality can be inside the system and available to everybody, everywhere, at any time. And the entire range of functionality needed can be from one vendor.

At MapInfo, we believe that, in this economy, capital budgets will be leveraged to create opportunities and insure better execution throughout the enterprise. And with Envinsa from MapInfo, location data can be linked to applications throughout the IS and scaled to serve many users giving them instant access to all of the power of enterprise-wide, location-enabled technologies.

George Moon, MapInfo Chief Technology Officer, designed the location technology to be joined at the hip with information systems. His message: "It's no longer helpful for us to just understand GIS systems or mapping. At MapInfo, we work to first understand the vocabulary and workflow of the organization before we propose a specific location-intelligence application. We don't believe that it is IT's job to master our technology and our business. We think they should be able to focus on their technology and the business their own company is engaged in. However, when any one system is installed to benefit any one group, it is IT's responsibility to leverage that functionality throughout the organization. That's where this partnership pays off. We make that process easy."

"When one business unit within an organization reaps the benefits, other groups say, 'I can use that.' Then they find out that, with Envinsa, it's already available to them. It's already there."



## Envinsa—The proven solution for delivering “Enterprise Location Services and Software.”

(IDC & ISSI, 2002)

Recently, IDC described a new segment of the IT landscape: “Enterprise Location Services and Software [use] spatial information technology to support corporate business processes.”\* The introductory article emphasized that IT budgets are tight, time is short and wasted money (in the form of multiple vendors all delivering a piece of the puzzle) must be eliminated. Organizations are specifying standards-based technology, available on high-performance, centralized servers, internally managed so that value and cost can be spread across multiple stakeholders.

Envinsa was developed to these exact specifications and confirmed its value as it became the standard solution for mobile operators who needed to deliver many—tens, hundreds or even thousands of—applications to thousands or millions of users. To accomplish this, functionality had to be precise, developer interfaces had to be simple, management needed to be straightforward and scalability and performance was paramount.

Any FORTUNE™ 500 corporation, major government department, multinational company or large application service provider has similar requirements and, as the wireless industry proves, only Envinsa can provide a dependable, enterprise-wide solution.

\*IDC Publishes Annual SIM Market Report. Geospatial Solutions; Nov2002, Vol. 12 Issue 11, p16, 1/4p

## Questions Envinsa customers ask to:

Meet their organization’s objectives / Compete successfully / Grow / Meet customers’ or constituents’ expectations / Optimize resources

### Retailing / Marketing

- Who are my “best” customers?
- How do I find more of them?
- How do I increase the value of my current customers?
- Which of my customers are profitable?
- What products should I stock?
- What products should be featured and when?
- Where should I focus my advertising on targeted customers?
- What are the characteristics of customers or prospects I’ve lost?
- How can I prevent customer loss?

### Manufacturing / Marketing

- Where is the best market for my products and services?
- How do I find the best markets?
- How do I determine the total untapped market potential in a given territory or region?
- Who are my key competitors by territory or region?

### Products and Services

- Where are my best customers?
- What products and services do my best customers choose more often?
- What additional products and services can I offer?
- Where are my newest products and services the most successful?

### Logistics

- Where are my drivers located at any given time during the day?
- How can I increase the number of stops per day that each driver makes?
- Where can I take a vehicle off the road and increase my service levels at the same time?
- How can I reduce the number of calls coming to my call center from customers wanting to know when their delivery is scheduled?
- How do I create a dispatch schedule that changes dynamically?
- How can I reroute my drivers with every schedule change?

### Locations and Real Estate

- Where should I put our next location (office, branch, etc.)?
- What sales and maturity rate can I expect at this new site?
- What markets should we locate in?
- What is the optimal number of stores (offices, branches) in a region?
- Which store (office, branch, etc.) should I close?
- Where am I able to provide what services?

- Where am I not able to provide a particular service?
- Where is the closest store (office, branch) for my customers?
- How far are customers traveling to get to our location?
- What mobile staff member (sales, emergency worker, delivery person, service personnel) is closest to an emerging situation or opportunity?
- What sales/service/marketing territories provide the best opportunities to my customers and prospects?

### Financial Services

- What is the appropriate mix of branch prototypes and ATMs to deploy in each market?
- Where should I expand my ATM or branch network?
- Where should I downsize services without risking profitability?
- What is the profile of our most profitable customer?
- Where am I vulnerable to competition?

### Insurance / Risk Management

- How can I determine potential risks around a particular location/property/policy?
- What is the PML (Probable Maximum Loss) if a man-made or natural disaster occurs?
- How can I build possible “peril” scenarios surrounding a particular location or policy?
- How can I pinpoint a policy on a map?
- How can I determine if a location (property) is subject to flood/hurricane/tornados/wind/hail/earthquake?
- How can I determine potential terrorist risks surrounding landmarks?
- How can my customers find the closest agent or authorized repair facility?
- How can my customers find the closest doctor or dentist?
- How can my customers find the nearest tow truck covered by their plan?

### Public Sector / Public Safety

- How can I serve my constituents 24/7?
- How can I make services more accessible to my constituency?
- How can I better manage the assets of my town/agency/jurisdiction?
- How can I make my agency’s work more accessible and visible to the public?
- How can I make it easier for citizens to find out where to go for different services?
- How can I take better advantage of data other organizations have?

- How can I share information within my own organization and with other agencies and departments?
- How can I share information about a location with first-responders?
- How can we improve our planning and response to natural and man-made events?
- How do I predict potential problem areas?
- What critical areas are near requested parade routes?
- Where are critical power or gas lines/bridges/landmarks/etc.?
- Where are the closest hospitals, schools, fire stations, etc.?

### Communications (Telecommunications)

- How can I match my PCS coverage geographically with the local calling areas of existing wireline telephone companies?
- How can I prequalify prospects for different levels of service?
- How can I tell if a prospect qualifies for high-speed Internet access in my network?
- Where should I build out my network infrastructure?
- Who can a subscriber call from their home phone without toll charges?
- Where can I target my efforts to generate more subscribers?
- How can I maximize the number of customers who could receive local phone access to the Internet with the minimum number of locations?
- Where are my subscriber’s nearest restaurant/nightclub/movie/etc.

### Mobile Services

- How can I optimize the deployment of my mobile workforce?
- How can I make my mobile workforce more efficient?
- Where exactly are my drivers, service personnel, salespeople, and colleagues at any given time?
- How can I relay the latest information to my traveling colleagues or field personnel (sales, service, etc.)?
- Who are other customers or prospects near my mobile workforce’s current location?
- Where are my mobile workforce’s next appointments?
- How far is one appointment from the next?
- How long will it take to get from one appointment to the next?
- Where is the closest ATM?
- Where is the closest hotel/restaurant/meeting facility?



**Envinsa Location Platform. “In-place, proven and providing value today in enterprise-wide and business unit applications.”**

- Location intelligence reveals human-scale qualities in data and IT services.
- Well-defined, broadly-used, straightforward interfaces deliver location intelligence functionality to any client, anywhere, anytime.
- Open standards ensure seamless IT integration and outstanding management capabilities.
- #1 in IT. Supported by fifteen years of software development, customization and solution delivery expertise. Proven leader in the wireless industry.
- “Prove It In Place” service promises least-cost/most-benefit deployment. Enterprise Location Services can enhance any number of enterprise systems, including enterprise resource planning (ERP), customer relationship management (CRM), supply chain management (SCM) and business intelligence.

**Enterprise Resource Planning:**

Operational and process improvements from the use of MapInfo technology have provided savings of



between \$1,500 and \$15,000 per employee, depending on the specific industry and application.

**Property Management:**

Hundreds of MapInfo customers have saved literally tens of millions of dollars and have generated exponentially greater revenue by making more intelligent decisions such as selecting optimum business locations, closing non-profitable outlets or combining branches.



**Customer Relationship Management:**

Many MapInfo customers have also experienced significant improvements in customer relationships by applying location to



their critical customer touch points including the Web, call centers, voice recognition systems and even wireless networks to provide better information more quickly to the people who need it most.

**Call centers:**

A 24-hour call center for an eight-state hospital group takes calls from



patients who need to see a doctor right away. The center’s operators match the caller with an appro-

prate physician who is also in the right location. The information offered is dependent on the time of day, the severity of the caller’s condition, and the hospital’s patient load at the location. In case of a localized disaster, the system schedules less critical patients further away from the disaster site and rushes emergency patients closer to the site. A new update to the system will even offer driving directions to ambulance crews who may be hampered by emergency equipment or routine traffic snarls.

In one of the world’s largest cities, the library’s Website matches patrons with local library events and resources. A localized job matching service is scheduled for the next update.

**Retail:**

One retailer’s cross-selling strategy drives retention and loyalty by linking purchasers with their ZIP codes to create



customized brochures and discounts tied to seasonal holiday or landscaping purchases typically made with other companies.

**Field Services:**

One MapInfo customer with 10,000 field engineers achieved a cost



savings in excess of \$5 million per year by deploying MapInfo technology to connect field services and customer care using location information. Envinsa helps field technicians get more done in less time by providing dynamic work orders based on proximity.

**Supply chain management:**

A national retailer can now track shipments anywhere in the world. By adding RFID (Radio Frequency Information Device) tags to pallets and cases of products, the firm tracks shipments from central shipping docks to



the delivery point. (RFID chips are devices that communicate using radio waves with wireless data networks, identifying their location and registering data stored on the chip.) The central database logs the location of the wireless device, whether it’s in transit or in a warehouse.

**Dispatch and Logistics:**

Transportation-dependent organizations (delivery, maintenance/repair, etc.) have achieved both dramatic savings and increased revenue by



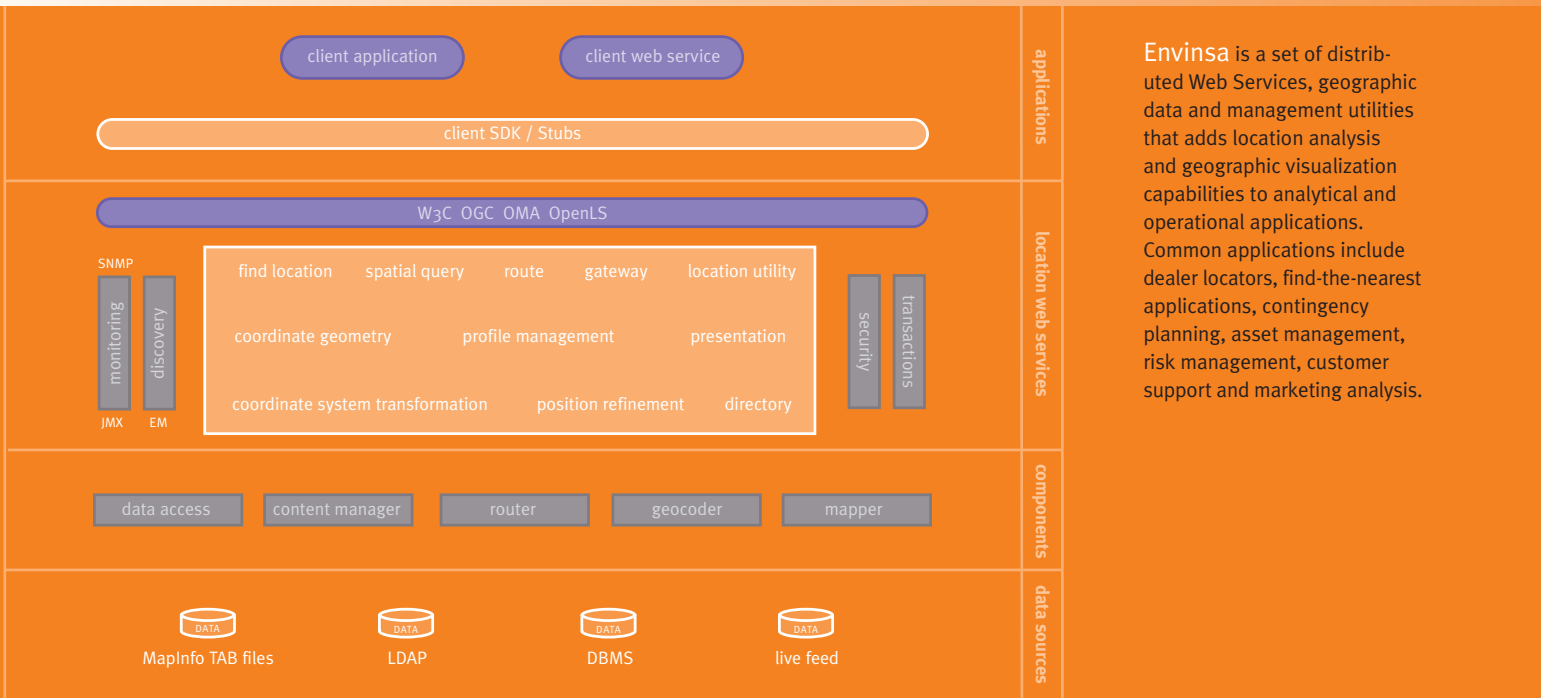
more effectively utilizing resources—in some cases resulting in as many as five additional stops per day, per driver.

**Real-time information shipment status and exceptions handling:**

Delivery companies can now aggregate ZIP code information and map out how packages should be loaded onto trucks for the most efficient deliveries. Shipping labels operate sorting machines that will put packages on pallets in the most efficient order for loading. With trucks



loaded more precisely, many thousands of gallons of fuel per year can be saved while providing superior service.



Envinsa is a set of distributed Web Services, geographic data and management utilities that adds location analysis and geographic visualization capabilities to analytical and operational applications. Common applications include dealer locators, find-the-nearest applications, contingency planning, asset management, risk management, customer support and marketing analysis.

### The technology leadership of Envinsa.

Envinsa provides a single, consistent location infrastructure that enables fast integration of location capabilities across any organization.

Using Java™ 2 Platform, Enterprise Edition, and Web Services, Envinsa delivers its capabilities in a robust, highly scalable platform. From the ground up, it's designed to be integrated into and managed inside a standard IT environment. Envinsa is flexible enough to support hundreds of location-enhanced applications, and concise enough to provide its capabilities in neatly packaged APIs, greatly reducing development cycles.

Envinsa is a suite of location capabilities that enable organizations to integrate location into existing applications as well as to create and deliver new location-enabled applications made to order by a specific business unit. Each capability in Envinsa is delivered as a Web Service through Web Service Description Language (WSDL), Simple Object Access Protocol (SOAP), Universal Description Discovery and Integration (UDDI), and Extensible Mark-up Language (XML). Each of these services executes specific logic that is required by the majority of applications.

Envinsa was created from experience gained around the world, through associations with thousands of different companies, in vastly different industries but with distinctly similar requirements of location. Another significant factor is MapInfo's experience building the robust server products whose components power Envinsa services. Finally, Envinsa is the beneficiary of MapInfo's significant experience in building custom solutions for companies that require vast, multinational IT resources.

### The Envinsa Management Strategy.

Envinsa includes an enterprise-class management console which is used to deploy, monitor, manage and maintain Envinsa, its server components and the applications that utilize Envinsa. The management console provides transaction logging, statistics and reporting. The enterprise management functions are provided through a peer-to-peer architecture and use both SNMP and JMX to communicate with other common management systems.

Envinsa SDKs—Envinsa includes an SDK that allows developers to build applications using XML or Java APIs, allowing customers to get up and running and productive more quickly. In addition, developers can create new services to extend functionality of Envinsa while being managed in a common infrastructure.



Key features of Envinsa include:

**Easy-to-use installation** wizard and an enterprise manager console. These allow your System Administrator to install, monitor, manage and maintain Envinsa, with a minimal impact on their resource allocation.

**“Plug-n-play” data packages** to support multinational deployments. In order to deliver consistent analysis and presentation, Envinsa data packages provide a common base set of geographic information for many major countries. Data can be centrally managed or distributed within each geography. Updates can be managed from a single point ensuring currency and compatibility.

**Adherence to industry standards** including Open GIS Consortium, Inc.™ (OGC), Open Location Services (Open LS), Web Services™ (SOAP, WSDL, UDDI), Open Mobile Alliance™ (OMA), Simple Network Management Protocol (SNMP) and Java Community Standards. Envinsa provides an open architecture that supports interoperability between software products in your current enterprise. Following industry standards also ensures the forward compatibility of Envinsa with new software and technology.

**Scalable architecture** allows for multiple installations of services. The Envinsa architecture supports mission-critical applications by ensuring high availability and no single point of failure. If a service becomes offline, requests are forwarded to an online instance on the network, so your mission-critical applications will continue to function.

**Support for widely adopted security models** to ensure the integrity of the information supplied to client applications. This feature also allows for user authentication, encryption and decryption of information exchanged between a client application and a Envinsa service. Entire transaction chosen information can be encrypted.

**Transaction logging and reporting functionality** facilitates internal and external billing for service usage. Transaction reports are generated per service, allowing organizations to track departmental and individual usage.

Envinsa includes a standard set of application programming interfaces (APIs) that perform the most common tasks used across a variety of location-based and location-enhanced applications. These APIs support these functions:

- **Geocode**  
City/state/province, ZIP/postal code, complete address, airport, place name, landmark, intersection, custom dictionary
- **Find location**  
Locate a landmark or point of interest within a specific area
- **Find nearest**  
Find the nearest points within a certain distance of an address/location
- **Routing**  
Between two points, shortest time, fastest time, text and map output
- **Mapping**  
Generate a map of a point, series of points, or route. Zoom and pan.
- **Profile**  
The Profile Management Service utilizes a LDAP server to maintain user, enterprise, data and map profiles. Also manages access controls.
- **Position acquisition**  
Request a mobile terminal's position from a mobile positioning center
- **Reverse geocoding**  
Given a latitude/longitude, return an estimated “real world” position (i.e., intersection)
- **Position refinement**  
Given a general location (i.e., cell tower), enable interactive self-positioning
- **Route Matrix**  
Return route matrix points without directions
- **Drive Time**  
Calculate the drive time/distance from a point or series of points
- **Thematic Mapping**  
Shade a map of map features based on data values from customer data
- **Buffering**  
Create buffers and query data that falls within those buffers

## Only MapInfo will guarantee your success.

MapInfo has been providing location-enabled solutions for nearly twenty years and has a long history of achievement. We helped to pioneer mobile location services beginning with satellite tracking systems, continuing with WAP, Palm, Pocket PC and today are the world leader in subscribers covered with location capabilities. Perhaps even more important is MapInfo's long history of providing true mission-critical solutions to the telecommunications industry. It's this experience that supports solid relationships with the world's leading mobile operators and their well over 400 million subscribers in over 40 countries.

This experience led to the selection of MapInfo as the vendor of choice for enabling location intelligence in leading large-scale, mission-critical enterprise solutions. We have developed large integration projects and custom applications with Oracle®, Siebel Systems, Inc.®, Sun®, IBM®, Siemens® and many other industry leaders. Many of these solutions were multinational and pulled together global resources, technology, geographic data as well as local expertise.

MapInfo is a proven advisor, business partner and vendor. And we welcome the opportunity to prove ourselves to you.

## Getting started.

### Define your objectives:

Objectives, or success factors, should be tied to measurable results such as reduced operational costs, increased revenue, faster response times to customers, or more accurate information to drive decisions. These should have specific evaluation criteria and direct cause and effect relationships.

### Define the user experience:

Defined with both the end user and IT group in mind, the best applications should require minimum end-user training and should ensure that ongoing management fits into existing processes.

### Define the deployment:

This is a combination of technology and business imperatives. Access constraints should be looked at and the least common denominator should always play a role to achieve maximum benefit. How will this all interface with existing systems? MapInfo's integration experience makes this difficult step a smooth and painless process. Everything from the Web and application servers, to the databases, operating systems and existing enterprise applications might be looked at. The key is to make sure true integration is possible, rather than "bolting-on" new proprietary systems.

### Deploy a proof of concept:

First, ensure the system is technically sound; second, benchmark initial usage and effectiveness; third, test the results against the objectives defined (success factors); fourth, adjust where necessary and plan for production.

The Envinsa Location Platform—Leveraging Organizational Resources Through Location Intelligence.



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## Envinsa. Locating Value in the Enterprise IT.

The MapInfo deployment approach is unique in the industry. After assessing the application, we publish design specifications that delineate the organizational needs, and cost-out the functionality and timelines required. And then, we prove the concept, in place, within the target information system. Our development approach is actually a promise to deliver the required technology at the right time and at an agreed-upon price.

While this promise is unique, the reason we can make it is equally so. We make it because we have proven excellence in the required technology, wide expertise in deploying the technology. And finally, because of our fervent adherence to IT industry standards.

By delivering mission-critical enterprise solutions for large public sector clients and multinational businesses, MapInfo has been perfecting our core spatial products for nearly twenty years. Envinsa is the culmination of that experience.

An organization's investment in integrating location into all aspects of the business is a significant decision and long-term proposition. It's important to partner with a company that possesses a solid, stable history, a tradition of innovation and a track record of delivering mission-critical solutions. Our success is built on committing to and guaranteeing our customers' success.

At MapInfo, we are aware that in these tough times, anyone can promise anything. It is our process, outlined above, which separates the promisers from the promise-keepers. In MapInfo's open, above-board, provable process, we can guarantee to extract costs from your operation and encourage better use of the resources and IT system you already have in place. We only ask that you give us a chance to prove it to you, in your organization, on your bottom line.

First, ensure the system is technically sound; second, benchmark initial usage and effectiveness; third, test the results against the objectives defined (success factors); fourth, adjust where necessary and plan for production.