



**State Unemployment IT Modernization:**  
*Lessons Learned – A Cost Effective,  
Sustainable, Low-Risk Approach*



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## Executive Summary

The Federal and State unemployment compensation (UC) program, (also referred to as the unemployment insurance [UI] program), created by the Social Security Act (SSA) of 1935, offers the first economic line of defense against the effects of unemployment.<sup>1</sup> Over the years, though, this critical asset of the U.S. economy has been reliant on either an ever-aging infrastructure or, at best, so called “modernized” systems that were built around expensive technology that’s now years out of date and was of little improvement over their predecessor systems to begin with. The U.S. General Accounting Office found that states are facing multiple challenges in modernizing their systems while at the same time recognized the significant dependency on and criticality of UI applications.<sup>2</sup> This creates an untenable situation. With so much at stake, it is critical that those Agencies charged with the administration of UI programs have at their disposal modern, reliable, configurable, economical systems that meet and exceed expectations for service delivery and integrity.

Despite the available funds, attention, and recognized need for state UI applications to be both brought current and to operate accurately, the predominant experience in the sector has been one of challenge and pervasive failure. The Standish Group<sup>3</sup> calculated a general success rate of 10% for IT projects budgeted at over \$10M. McKinsey Consulting reported that 50% of IT projects with budgets greater than \$15M deliver 56% less functionality than planned<sup>4</sup>. Consistent with these findings, in recent UI Modernization projects resources have been wasted and projects have failed to be delivered on time, if at all. Many who have “modernized” have done so with technology already years out of date and have been plagued by errors in design and execution resulting in costly, publicized failure and scrutiny. Requirements and features originally key to these projects have been compressed or abandoned to make up for missed deadlines. Worse still, the resulting applications have proven an unbearable strain on state IT budgets and resources. **Clearly, a new solution is needed.**

By analyzing the challenges of the past while utilizing current software architectural design principles and decades of UI experience, On Point Technology has developed the OPTimum Framework and UI Benefits and Tax Application. With OPTimum UI, On Point Technology has crafted a solution that meets current challenges while also providing state UI programs with a platform that will support their evolving business needs and priorities into the future. Unprecedented in the UI sector, OPTimum is a micro-service, configurable application framework built along the same design principles used by tech giants such as Amazon and Google. It also utilizes these same principles to enable innovation and efficiency through agility. Our configurable, hybrid-cloud technology enables the OPTimum Platform to not only minimize hardware, development, training, deployment, and maintenance costs, but also minimizes risk

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<sup>1</sup> The Federal Department of Labor Unemployment Insurance Directors’ Guide: Essential Elements for the Unemployment Insurance (UI) Director, September 2015

<sup>2</sup> US GAO UNEMPLOYMENT INSURANCE INFORMATION TECHNOLOGY: States Face Challenges in Modernization Efforts, September 2013

<sup>3</sup> Standish Group 2015 Chaos Report

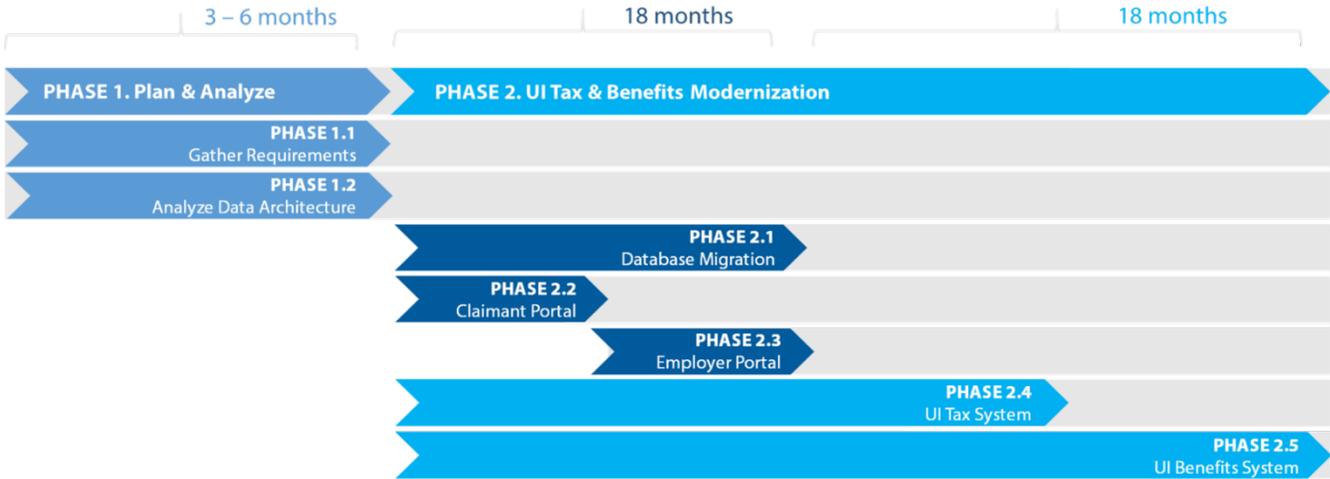
<sup>4</sup> Delivering large-scale IT projects on time, on budget, and on value, McKinsey & Company 2012

with quicker deployments of functioning software and far fewer disruptions to your operations. OPTimum doesn't just support your UI operations, it **empowers** them.

On Point Technology's best-of-breed UI Modernization Solution, based on current technology, incorporates decades of UI best practice and business experience.

	<b>OPTIMUM PLATFORM</b>	<b>The Legacy</b> <i>Industry Standard Approach</i>
<b>Architecture</b>	User Configurable <i>Continuous Updates</i>	Vendor Dependent <i>Poured Concrete</i>
<b>Business Model</b>	Flexible, Integrated Framework <i>Modern, Adaptive Technology</i>	Expensive Integrators <i>Outdated Technology</i>
<b>Risk / Return</b>	Iterative Approach, <i>Low, Shared Risk, Fast Delivery</i>	High Customer-Borne Risk <i>90% Failure Rate</i>
<b>Pricing</b>	Low Implementation Costs <i>Includes Support</i>	Large Up-Front Fees <i>Unpredictable Deployment</i>

On Point Technology's innovative methodology supports an iterative approach to software development that addresses the highest risk items at every stage of the application development lifecycle. This iterative approach mitigates risks through demonstrable progress and executable releases that enable continuous end-user involvement and feedback. From our experience, the complexity of a project this size requires a phased-iterative approach to design and implementation of the system.



By deploying in this manner, a state can configure and improve the product step by step. Defects can be detected in early stages while proven code and features are pushed to production. This allows stakeholders to see real, tangible benefits much earlier in the product schedule. A secondary benefit of this approach allows for reliable user feedback long before full deployment. In short: we offer more demonstrable benefits with less risk.

## Introduction

Federal and state government has spent billions of dollars on developing or acquiring, implementing, and maintaining UI management systems that often fail to meet cost, schedule, and performance goals. The story of recent UI modernization efforts is a litany of disappointments and wasted resources. Large integrators repeatedly fail, because they lack sufficient subject matter expertise to be successful. Unfortunately, they still pocket enormous fees and drain Agency resources to support their ineffective deployments. Systems touted as “new” or “current” are just retreaded transfer systems from other states built around brittle, monolithic technologies that are decades out-of-date. High operational costs have forced some states into consortiums to push that burden down the road. The risk of failure is borne entirely by the state, with failing integrators walking away unscathed. Poor business processes and controls have generated mishandled claims and costly, public exposure along with ruined careers. As Google and Amazon have shown, extremely large systems can be effectively, and often transparently, deployed, while incurring much less risk.

### A Short History

Most the states’ existing systems for UI operations were developed in the 1970s and 1980s. Although some Agencies have performed upgrades throughout the years, most of the state legacy systems have aged considerably. These systems have been described as “brittle”, “patched”, “spaghetti”, “band-aided” and a “spider web of programs.”<sup>5</sup> As they have aged, the systems have presented challenges to the efficiency of states’ existing IT environments. Looking to capitalize on ARRA<sup>6</sup> and Reed Act<sup>7</sup> funding, large integrators have entered the sector promoting UI modernizations based on brittle, monolithic architecture as difficult to update as it is expensive to maintain. Lacking current best practice design methodologies and limited by insufficient staff subject matter expertise (SME), these solutions are viewed as less than successful in the UI community, as many have precipitated substantial public exposure due to lapses in integrity or sound business processes supported by a modern architecture.

As the graphic below shows, most of the IT modernization projects attempted have either failed or been “challenged” (defined as schedule expanded, over budget and/or lacking critical features and requirements).<sup>8</sup>

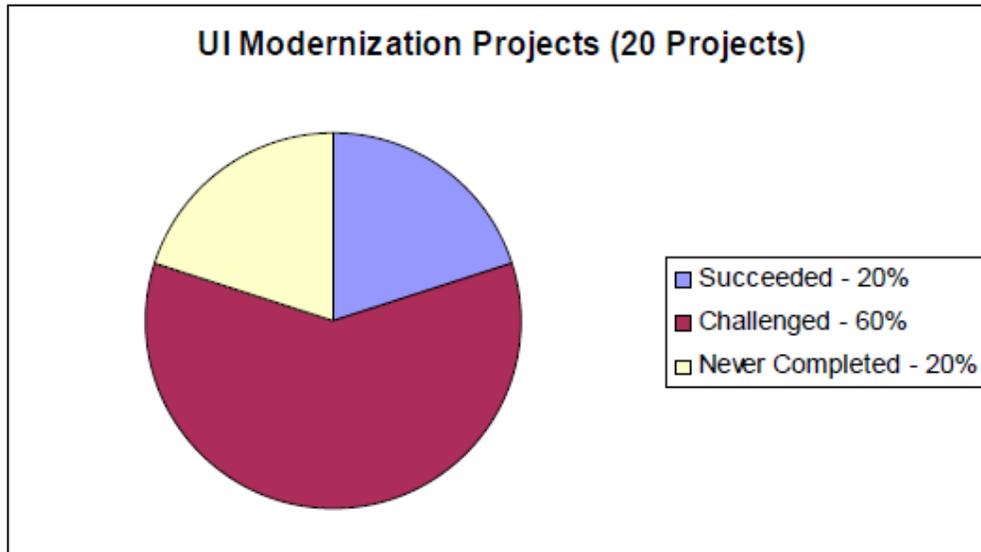
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<sup>5</sup> National Association of State Workforce Agencies: IT Questionnaire

<sup>6</sup> Unemployment Insurance Provisions in the American Recovery and Reinvestment Act of 2009

<sup>7</sup> THE REED ACT PROVISIONS OF TITLE IX OF THE SOCIAL SECURITY ACT

<sup>8</sup> Building a 21st Century UI Infrastructure and Service Delivery System. Joe Vitale, Executive Director Information Technology Support Center, NASWA



The benefits of a modernized benefit and/or tax system, including lower costs, improved customer service, better staff productivity, and improved compliance with laws are high and numerous. In addition to the external challenges to success, however, there are many internal challenges and issues that states must overcome to complete a successful modernization of their UI systems. The U.S. Government Accountability Office provided comprehensive testimony before the United States House of Representatives' Ways and Means Committee detailing these challenges. Among those factors cited as negatively influencing the outcome of modernization efforts to date are:

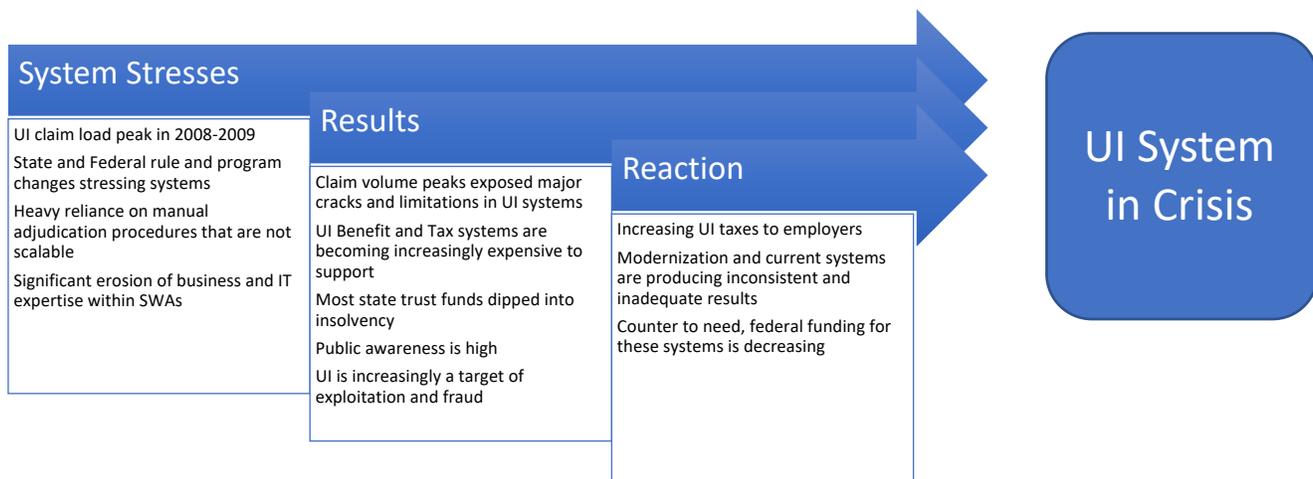
- **Limited funding and the increasing cost of UI systems.** The recent economic downturn resulted in smaller state budgets, limiting what could be spent on UI system modernization. In addition, competing demands and fluctuating budgets made planning for system development, which can take several years, more difficult.
- **A lack of sufficient expertise among staff.** Many states reported that they had insufficient staff with expertise in UI program rules and requirements, the ability to maintain IT systems developed by vendors, and knowledge of current programming languages needed to maintain modernized systems.
- **A need to continue to operate legacy systems while simultaneously implementing new systems.** This required states to balance scarce resources between these two efforts.

These difficulties are to be in no way trivialized. State UI systems are complex, mission-critical enterprise applications with an ever-increasing need for configurability and scalability while remaining economical and maintainable. Any truly comprehensive and successful solution will need to address each root challenge presented by UI application operations.

## The Problem

In a survey published by the National Association of State Workforce Agencies (NASWA), states reported the following major areas of concern with their systems:

- Over 90 percent of the systems run on outdated hardware and software programming languages, such as Common Business Oriented Language (COBOL), which is one of the oldest computer programming languages.
- The systems are costly and difficult to support. The survey found, for example, that over two-thirds of states face growing costs for mainframe hardware and software support of their legacy systems.
- Most states' systems cannot efficiently handle current workload demands, including experiencing difficulties implementing new federal or state laws due to constraints imposed by the systems.
- States have realized an increasing need to transition to web-based online access for UI data and services.
- Skyrocketing cost. Nine out of 10 states report maintenance, support, and ongoing operations of these old systems escalating in cost every year.<sup>9</sup>



## Examples of Past Failures

The NASWA/ITSC survey demonstrated the dire condition of state UI IT systems and the urgent need to modernize them.<sup>10</sup> However, many past UI IT modernization efforts have been challenged by cost and time overruns and have not delivered the functionality a state required. Some cautionary examples:

- State A spent some \$150 million and never got a system.
- State B spent a rumored \$50 million and never got a system.

<sup>9</sup> National Association of State Workforce Agencies Center for Employment Security Education and Research, Information Technology Support Center, *A National View of UI IT Systems*, July 2010.

<sup>10</sup> *A National View of UI IT Systems*. National Association of State Workforce Agencies Center for Employment Security Education and Research Information Technology Support Center. July 2010

- State C worked on the application for around 7 to 8 years, ran well over budget and never got the system as originally described.
- State D made two failed attempts but didn't get a system.
- State E has had an integrator working on a modernization for over 5 years and it still hasn't been completed.
- State F modernized only its Continued Claims process and ran into numerous problems wherein it couldn't pay claimants on a timely basis.
- State G's effort ran over schedule and well above budget.
- State H ran well over budget and way past the scheduled go-live date.
- State I ran well beyond budget and schedule and they settled for less complete functionality than originally proposed (Deloitte).
- State J made one failed effort that cost some \$75 million and then went to a new integrator application which is now in the courts and under internal review due to the way claims are processed.
- State K managed to transfer another state's prior implementation, but the resulting support costs were so high they had to pursue a consortium grant to pay their vendor.
- Etc.

### The "Consortium" Approach – A Struggling Initiative

The U.S. Department of Labor has encouraged states to pool their resources to reduce risk in pursuit of a single common system they can each use applying state-specific minor programming and configuration settings. In theory, it is a sound concept. But in practice this "Consortium" approach has been met with difficulty and failure:

- Differences in state laws and business processes negatively impacted the effort to design and develop a common system.
- States within a consortium differed on the best approach for developing and modernizing systems and found it difficult to reach consensus.
- Decisions made by consortium leadership raised concerns about liability for outcomes that could negatively affect member states.
- Consortia found it difficult to obtain a qualified leader for a multistate effort who was unbiased and independent.<sup>11</sup>
- Integrators have either ignored the requirements included in state RFPs or have attempted to import requirements from other states without regard for accuracy or appropriateness.

It is manifest that to successfully address these challenges an integrator would have to have unmatched UI experience and a modern application platform. To date, these requirements have not been demonstrably met by the consortia that vendors engaged.

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<sup>11</sup> GAO: Unemployment Insurance Information Technology: States Face Challenges in Modernization Efforts. September 2013

## The High Cost of Failure

Each failure represented not only wasted state and federal resources but also frequently culminated in public relations difficulties for the Agencies, damaging the careers for the individuals involved. Even a cursory examination of recent individual state and consortium UI modernization efforts shows a startling pattern of failures:

- Large generalized IT consulting companies have burned through more than adequate budgets and provided little in the way of deliverables. These companies include Accenture, Deloitte, Tata, HCL, and IBM, etc.
- Outdated or insecure technological solutions have been transferred/utilized.
- Excessive maintenance fees and vendor dependencies are inbuilt.
- Selection of vendors lacking adequate subject matter expertise.
- Little or no process improvement.
- Failed adaptations of other state or industry systems.
- Reduced scope or compromised features.
- No economy of scale achievement in consortium projects.
- Poor project management among others.
- Very public exposure of failed initiatives.

## The Cloud: Some Cautionary Notes

The DOL's adoption and push for Cloud technology is a new opportunity in the UI space. The UI Cloud Services model is intended to systematically allow UI state Agencies to benefit from Cloud computing by:

- More efficiently and cost effectively modernizing UI IT state Benefits and Tax Agency systems.
- Reducing the cost of maintaining and supporting a UI IT single state or multistate consortium modernized system.
- Promoting the graceful evolution of a UI IT system over time.
- Maintaining the security of the state data and protecting the identity of the UI customers.<sup>12</sup>

That said, the exodus to the Cloud is not without some risk.

- **FedRAMP Certified does not equal secure applications:** Failure to adhere to application engineering best practices can still open vectors for attack on a FedRAMP platform. In addition, though cloud-services can be made secure, OPM FISMA audits routinely show that some Agencies don't know or can't document the security status of their cloud-based infrastructure or hosted applications.<sup>13</sup>
- **The Pitfalls of Personally Identifiable Information (PII) in the cloud:** There are extensive guidelines and regulations governing the storage and use of PII data to support state UI

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<sup>12</sup> Overview of the USDOL's adoption of Cloud Technology. Dawn Leaf, Deputy Chief Information Officer U.S. Department of Labor. Industry Day, July 18, 2014

<sup>13</sup> Federal Information Security Management Act Audit FY 2014

operations. Many of the leading commercial providers, even those who are FedRAMP certified, have Terms & Conditions that conflict with CFR, DOL regulations and state guidelines for UI PII. In addition, cloud providers who host PII are much more likely targets for a cyberattack. The OPM Hack in 2015 should serve as a cautionary example of this vulnerability.<sup>14</sup>

Though navigable, there are many considerations that must be addressed when hosting state data on a cloud infrastructure. On Point Technology is unique in the industry, possessing both the depth and breadth of specific UI regulatory knowledge and the technical expertise to implement solutions that meet applicable guidelines while moving the states' interests in the Cloud forward in a safe, auditable, defensible manner.

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<sup>14</sup> <https://www.opm.gov/news/releases/2015/06/opm-to-notify-employees-of-cybersecurity-incident/>

## The Solution

An important step to take when approaching a complex project such as a UI modernization is understanding past approaches and project missteps others have experienced. As detailed in the preceding sections, many major UI system modernization efforts have failed or have been severely compromised. **A new approach is manifestly required.**

### THE OPTIMUM VISION

As Agencies are constantly facing new challenges and needs, solutions that can adapt and scale with those requirements are vital. The software architectures and practices of the past are no longer viable. On Point Technology has taken an unprecedented approach within the UI sector in creating a micro-service, configurable application framework which can accommodate the evolving needs of any organization. The business and technical benefits of this approach have been proven time and again by large service providers such as Google and Amazon. OPTimum UI is a technological foundation architected along those same principals to enable innovation and efficiency through agility. This configurable, hybrid-cloud technology enables the OPTimum Platform to not only minimize hardware, development, training, and deployment costs but also lessens risk with quicker deployments of functioning software and far fewer disruptions to your UI operations. It is built to be flexible and adaptive, business-user friendly, and provide the highest lifetime value/ROI. On Point Technology has employed a team of software architects and UI experts to design and build this platform. We know state IT environments and business needs, so we designed the OPTimum platform and products to work optimally in these environments.

The OPTimum UI Modernization Solution is a powerful UI Benefits & Tax Application built atop the flexible OPTimum architecture. OPTimum UI Modernization combines the most comprehensive technical framework with advanced workforce applications to empower UI Agencies, enable innovation and promote efficiency through agility and best practices. On Point Technology products have a 100% deployment success rate over our decades-long company history as a UI solutions provider across the nation. This is a best-of-breed UI Modernization Solution, based on current technology, incorporating On Point Technology’s decades of UI business process experience.

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## THE OPTIMUM SOLUTION

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Important for the long-term success of any complex undertaking such as a new Tax and Benefit system, is the ability to adapt and be flexible. This is true for both the technology and the people who shape it. Any UI system designed and built without this consideration will lead to the inability to respond to regulatory changes and technology improvements which won't effectively serve the needs of its constituents without prohibitively expensive, risky, and painful changes. The evidence to support this assertion is pervasive and compelling as presented in “The Problem” section above.

### Component Centric Architecture

As has been demonstrated time and again in legacy UI system architecture (and in most modernized systems as well), tightly coupled software presents myriad challenges to states looking to extend/modify/change their systems of record. As these monolithic systems get larger, coupling severely limits the scope of any change and therefore self-propagates. The most direct way to extend tightly coupled code is often to weave in even more interdependence, resulting in ungainly, complex, increasingly unmanageable systems. OPTimum addresses this defect at a foundational level which includes a suite of UI services addressing fundamental business functions such as claimants, claim, overpayments, and others. The services can be composed in different ways to create different applications, e.g. claimant portal, employer portal, appeals, etc. This approach avoids the tangled mess of application code that inherently develops within the tightly coupled, monolithic systems of the past.

### Configurability

Rather than employing the “one size fits all” approach so common in state UI application design, OPTimum employs advanced configurability options to manage the user interface and system operation. This is accomplished through a variety of mechanisms deployed across the application framework and tailored to address the complexity of each configuration need. The simplest examples are values stored in databases or files. The second level consists of placeholder replacements such as logo images, verbiage, text on screens (to support multi-language deployments), etc. Lastly, the third level is declarative configuration using XML or scripting languages. The most complex relies on industrial standards such as the Java Business Process Model (jBPM) and rule engines. When used in concert these tools empower the user to modify the UI system to meet changing needs without requiring extensive, and expensive, custom programming.

## Rules-Driven Customer Empowerment

Rather than embedding process managing code in a tightly-coupled monolithic architecture, the rule engine driven business process allows the user to express and modify very complex operations in an accessible format. The user can also verify and ultimately deploy to production without losing the integrity and purpose of the software in an indecipherable mess of spaghetti code. In the OPTimum UI application, a simple visual-based editor is provided to allow authorized Agency users to modify business processes and rules. Once the modifications are tested and approved the newly modified processes, rules, and templates can be deployed. All these can be done by the Agency without involving On Point Technology. Case Management Services are designed to support the workflow and subsequent modifications caused by changes to regulations, internal processing policies, and improvements.

## Extensibility

Anyone who has maintained a UI application knows that it cannot be a static system if any semblance of operational success criteria is to be met. These applications must be designed to not only serve the “now” but also with the future in mind. For this reason, extensibility is an inherent design principle of the OPTimum Framework. Extensibility allows the operator to change the system’s behavior without disrupting the rest of the system. There are several design patterns and principles in Object Oriented Development (OOD) and Service Oriented Architecture (SOA) geared toward this goal. We build abstraction into the micro-services, domain object models, and user interfaces so that different parts of the system can be extended without affecting the rest of the system.

## Reporting

As UI experts, On Point Technology understands the criticality of providing accurate, auditable reporting not only for the purposes of federal oversight but to serve state interests and initiatives as well. The OPTimum UI Modernization Solution can produce all Federal Reports. In addition, the OPTimum deployment includes a flexible user-driven interface to create custom reports and analytics on demand. As a mission-critical partner to state Agencies for over 25 years, On Point Technology’s experience allows us to reliably generate all mandatory reports required by the U.S. Department of Labor to meet compliance guidelines.

## Adaptable and Scalable Platform

Good application design is fundamental to the creation of a software platform that is scalable and adaptable. However, it would be unrealistic to represent that this design principle could be retrofitted into a legacy, transfer UI, or a generic case management system. That is why OPTimum micro-services are designed from the ground up with scalability and reusability in mind. Since each micro-service focuses on one context (e.g. claimant, claim or overpayment), it is much easier for software engineers to design services that are stateless, and therefore much easier to scale up. This flexibility is just not possible using monolithic, tightly coupled design principles.

## Enterprise Service Bus

A concept largely unknown among the monolithic UI application developers of the past, an Enterprise Service Bus (ESB) is a modern application design implementation of a communication layer between loosely coupled code elements. This ESB, incorporated by design into the OPTimum Framework, allows for:

- Standardization of code across the application domain
- Loose coupling of system functions
- Scalability and Reliability
- Better message routing yielding better workforce management
- Complex messaging allows for more capable Application Program Interfaces (APIs)
- Messages as interchange between bounded contexts
- Publication/Subscription of events for future integration
- Advanced mapping and data interchanges for legacy external code
- Routing, versioning, and general governance control

## Version Control

As many states have experienced in the deployment and maintenance of their UI systems, running without adequate version control is like doing open-heart surgery all the time. In the OPTimum Framework, all source code is under source control. OPTimum includes industry-strength version control systems. Product versioning and releases are categorized to major, minor, and maintenance and each product version will have its own branch. Source files used to create the version will be labeled with the product's version. When a problem is identified in the production environment, related files are flagged and available for review. The security and peace of mind precipitated by good version control is priceless.

## Change Control

Automated Building, Testing, Provisioning, and Deployment to an Immutable Infrastructure: To further reduce risks and increase quality, OPTimum requires that all changes to code go through a fully automated build, test, and provision cycle before being deployed. Using the practice of an immutable infrastructure, absolutely no changes can be made to the service or server that don't go through the entire process again. This process control removes any risk of manual deployment error or variation in configuration between production and test servers and is the only way to achieve the repeatable high-quality output that is critical to the ongoing success of an application. When a major functional change or update is needed, a new release is initiated. The category (major, minor, maintenance) of the release depends on the scope of change.

## Multi-Speed IT

With the ever-evolving demands imposed on state UI systems, it is no longer tenable to maintain an inflexible UI service subject to inherent design limitations. Not all services are created equally; some are experimental and low risk, while others are mission-critical and high risk. The OPTimum Framework, through the utilization of Multi-Speed IT principles, defines

procedures for the governance, testing, and approval of deployments across various classes of services. This allows the state to lock down the areas requiring regulatory scrutiny, while not standing in the way of innovation elsewhere.

### Data Migration / Data Architecture

Data architecture is generally regarded as the most important part of any enterprise system. This is doubly true in designing or migrating a UI application. UI data is complex and historical data can be maddeningly dirty. On Point has hundreds of person-years interpreting UI data as well as investigating the processes and procedures that generated it. It is critical that any new supporting data architecture presents the user with tables and columns that are expressed in the same UI language that the state staff uses. Designing the right data architecture takes a deep knowledge of the unemployment insurance business environment. What is a UI issue? What data goes along with an issue? What's the relationship between a UI issue, a claim, and a claimant? The need for UI knowledge has a profound impact on the success of proper data migration and modeling in a UI environment.

### Legacy Integration

The usefulness of a new application is likely dependent on how well it can integrate with existing data sources and operations. Integration with existing systems is often a critical element of an upgrade project. Whether legacy systems are discontinued altogether, or an implementation of the new system requires phasing out the legacy systems step-by-step, the methods and approaches to integration reflect knowledge and experience of the vendor's teams. On Point Technology has years of experience integrating our products with mainframe systems and ancillary software/hardware (data exchanges, printing, imaging, schedulers, SharePoint, etc.).

## A New Deployment Approach

### Traditional Waterfall Implementations of the Past

In the traditional Big-Bang approach, the entire Benefit and/or Tax system is ported to a new platform and moved to production in an iteration. Though a standard approach over the past few decades, it necessitates tremendous post Go-Live support, along with an inevitable drain on state resources and budget. For many states, this post implementation issue mitigation never ends and they continue to suffer skyrocketing costs for maintenance, support, responding to new state or federal laws, lack of scalability to handle workload surges, and inhibited productivity due to required manual processes and limitations posed by inadequate technology. The challenges created by the Big-Bang approach are manifest and myriad:

- **Duration** - These types of deployments take years to complete.
- **Management Challenges** - Managing such a project is complex, and not because of the inability of the project managers to perform, or the vendor being unresponsive. An investing Agency often does not assign or provide sufficient resources to proceed with the implementation. And again, it does not happen because the investing Agency does not see the importance of the project. On the contrary, the need for change is usually more than ripe. The managers and subject matter experts are truly overloaded by trying to keep the old system alive while delivering the results for which they are responsible. The project's timeline tends to be delayed and in relation to that, cost tends to go over budget.
- **Post Deployment Challenges** - When the system gets through all phases of development and is finally ready for operation the technology and, more importantly, the laws and regulations may have changed. This leads to endless cycles of rework, thus again, increasing the cost and chance of failure. Third, long implementations are characterized by fading enthusiasm and interest of the project champions which negatively impacts the system's successful adoption. No new technology of this size is a turnkey product. Implementation of the new processes and buy-in of the Agency staff has an extreme importance after the system's Go-Live day.

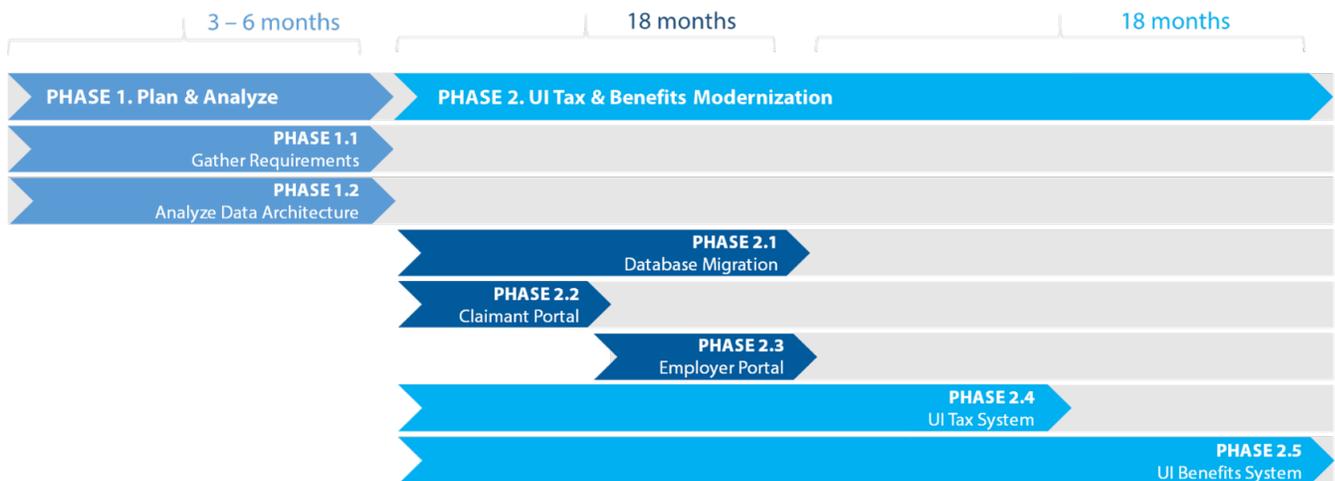
### Practical Agile

On Point Technology uses a practical approach to Enterprise Agile methodology to align business goals and technical implementation. The methodology supports an iterative approach to software development that addresses the highest risk items at every stage of the lifecycle, significantly reducing a project's risk profile. This iterative approach mitigates risks through demonstrable progress and executable releases that enable continuous end-user involvement and feedback. From our experience, the complexity of an IU Benefit and/or Tax project requires a phased iterative approach to design and implement the system. Advantages of this approach include, but are not limited to:

- **Planning Accuracy** – Within a short period, we can predict with much greater accuracy the effort required to build an application component of the project.

- **Efficient Resource Planning** – All project participants, including Agency SMEs, On Point Technology’s team members, and third-party specialists may be assigned to the tasks that require their attention based on the phased iterative project plan.
- **Shorter Time to Go-Live** – Allows the division of the project into the clearly defined components, and if possible, to schedule them in parallel work-streams. This approach also yields an accelerated deployment cycle whereby the customer can provide incremental improvements to services and functions throughout the project. The Agency can show real value, rather than hoping for some future success arguably realized during a subsequent administration.
- **Measurable Results** – Since each iteration delivers fully tested software components, the project results can be transparently measured per tasks that are completed.
- **Minimal Post Deployment Support** – Process, Bug, and Issue remediation is handled throughout the project timeline, not after the deployment milestone.

The following illustration describes the recommended phases:



## A New Fiscal Model

The perpetual license model has historically been plagued by scenarios where customers depended on buying a single version of a product and continued to use it for a very long time, likely many years past the end of support. With a subscription model, the customer can rely on an application and service that is current and maintained, vastly decreasing support costs for the state while increasing the predictability of operational costs. In addition, the need for large-scale future upgrades is eliminated as upgrades and support are included in the base subscription. The application capacity can also be more readily scaled in this model to meet increased customer load or requirements.

The subscription approach also provides the customer with the opportunity to avoid a prohibitive capital expenditure and amortize the cost of the application over time. Lastly, in a subscription approach, On Point Technology shares any risk of success with the state. It is too common that vendors fail in their UI installations with little or no repercussions. On Point

Technology is committed to our customers and their success, and by providing our applications through subscription we effectively carry much of the risk, not the customer.

## Where We Are

For over a quarter of a century On Point Technology has consistently met and exceeded Agency expectations with a suite of UI applications designed to address the full range of benefit operations. The OPTimum solution is the latest entry in this long and successful lineage of UI solutions, supporting the full range of UI operations on an architected, micro-service, continuous delivery, best-of-breed software platform.

State	CORE SYSTEM FUNCTIONS					INTEGRITY ADD-ON FUNCTIONS			SERVICES
	Full Benefits Modernization	Full Tax Modernization	Adjudication & Overpayments	Reporting	Employer Services	Fraud Detection & Investigation	Predictive Analytics	Collections & Legal Enforcement	Process & Data Analysis
Alabama			✓	✓	✓	✓	✓	✓	
Alaska			✓	✓	✓	✓	✓		
Arizona			✓	✓	✓	✓	✓		
Arkansas			✓	✓	✓	✓		✓	
Colorado			✓	✓	✓	✓	✓		
DC	✓		✓	✓	✓	✓		✓	
Georgia			✓	✓	✓	✓	✓	✓	
Idaho									✓
Illinois			✓	✓		✓			
Indiana									✓
Iowa	✓	✓							
Kentucky			✓	✓	✓	✓		✓	
Louisiana						✓	✓		
Massachusetts				✓	✓	✓	✓		
Nebraska				✓		✓	✓		
Nevada				✓		✓	✓		
New Jersey			✓	✓					
North Carolina			✓	✓	✓	✓	✓	✓	
Ohio				✓	✓	✓	✓		
Puerto Rico			✓	✓		✓		✓	
South Carolina			✓	✓	✓				
South Dakota									✓
Tennessee				✓		✓	✓		
Texas				✓	✓	✓	✓		
Washington			✓	✓					

## Conclusion

Modernization can be defined in many ways, all with the common goal of minimizing hardware, reducing development costs and maintenance fees and decreasing the deployment risk. On Point Technology's approach lessens business risk and total cost of ownership and can be done in a way that your business operations will be minimally disrupted.

On Point Technology understands that the worlds of UI and technology are constantly changing. By listening to our customers, being responsive to federal and state regulatory changes, and staying abreast of technological advances, we are committed to remaining the leading UI solution provider. Through On Point Technology's combination of business expertise, software solutions, service delivery, and industry knowledge, we consistently apply our significant expertise to help UI programs operate at a higher level of efficiency. We think nationally and work locally in developing solutions that address the unique laws, rules, and regulations of each state. For over a quarter of a century, we have consistently met and exceeded Agency expectations with a suite of UI applications designed to address the full range of state operations. The OPTimum solution is the latest entry in this long and successful lineage of UI solutions, supporting the full range of UI operations on an architected, micro-service, continuous delivery, best-of-breed software platform.

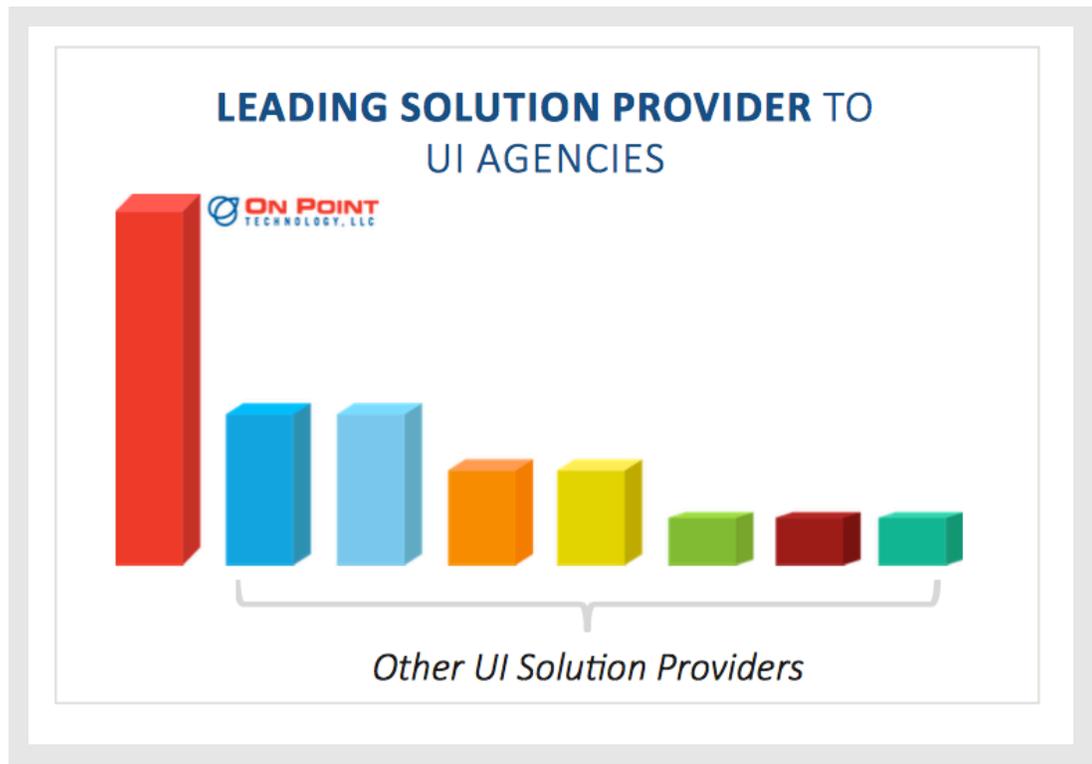
## About On Point Technology, LLC

In 2015, NASWA and the Integrity Center of Excellence published the results of a survey identifying On Point Technology as the overall leading solution provider to UI Agencies. From our inception, our mission and dedication have remained constant; to provide the United States UI community with the highest quality, modern Information Technology services, and software applications. Through On Point Technology's combination of business expertise, software solutions, service delivery, and industry knowledge, we are experts in helping UI programs operate at a higher level of efficiency. On Point Technology provides:

- **Unique Understanding of the Department of Labor Environment** – Our experts have walked in your shoes because they have worked in the trenches at UI Agencies. Therefore, On Point Technology understands the many difficult challenges of maintaining antiquated, legacy mainframe systems while having to implement federal and state regulatory and administrative changes within the context of the urgent need for technological modernization.
- **Technical Expertise** – Our staff has the full complement of the required skills and experience to manage, maintain and improve both your mainframe and web-based systems and their underlying infrastructures.
- **Past Performance and Relevant Experience** – On Point Technology has experience in service delivery and maintaining contracts with 25 UI Agencies over 20 years.

On Point Technology brings together a full and comprehensive core team of 64 UI management and user experts, including software architects, designers, engineers, user support and QA analysts—all with significant experience in UI software development and support. In other words, WE GET IT. While other firms may have a few UI experts that they shuffle around between projects, On Point Technology's staff are all dedicated experts. Having worked in 25

states, we bring a national perspective of best practices and a comprehensive knowledge of UI. Leveraging this expertise, On Point Technology products have recaptured or prevented over \$4 billion in improper payments for our partners. Designed with an eye on the future and with a deep understanding of the past, all our products are built to maximize value by being flexible and integrating with both legacy and modern systems.



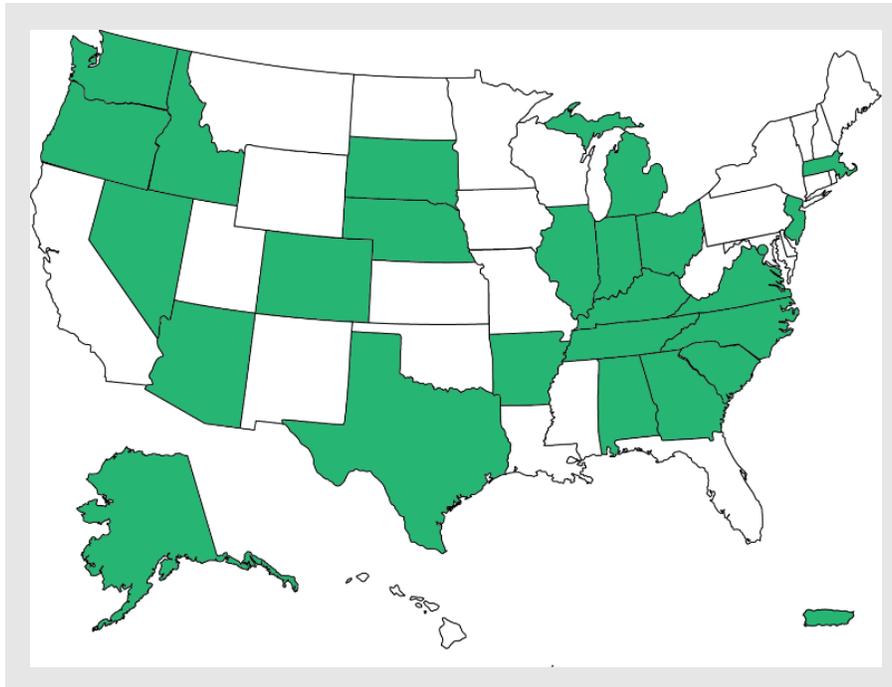
### On Point Technology's Core Competencies

Anchored in our core product offerings, On Point Technology also offers a broad spectrum of industry leading information technology and security services and solutions. Our core competencies include the following:

- Modernization (UI Tax and/or Benefit Systems)
- Fraud Detection and Integrity Solutions
- Enterprise Systems Architecture Analysis, Design, Development & Integration
- Custom Software Application Development
- Software Application & Data Migration
- Software Application/Infrastructure Development & Life Cycle Management
- Business Process & Requirements Definition
- Application Maintenance and Support
- Program & Project Management
- Data Center Support (Software Maintenance, Database & Server Administration)
- Data Analytics, Predictive Modeling, Machine Learning
- Quality Assurance & Testing

- Security & Information Assurance

## On Point Technology's Unrivaled Experience Footprint



## Contact Us

For information on our products and services visit our corporate website at [www.onpointtech.com](http://www.onpointtech.com). A brief overview video can also be viewed on our homepage.

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