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# Illinois Department of Innovation and Technology

## Procedures for Using IT Resource Provider (ITRP) Multi-Step Contracting

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February 28, 2017



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# **Procedures for Using IT Resource Provider (ITRP)** **Multi-Step Contracting**

February 28, 2017

## **Executive Summary**

This guidance provides an overview and procedures for agencies to obtain Information Technology (“IT”) resources using the new Information Technology Resource Provider (“ITRP”) multi-step contracting process. This will be an important tool for agencies to consider to meet their IT resource needs, in addition to considering other approaches, such as using internal resources, or using other procurement or contracting methods.

Available ITRP contract resources are grouped into six IT skill categories. Through a competitive solicitation process, the state has pre-qualified vendors who have met minimum capability requirements to provide resources in one or more of these categories:

- A - Application Development
- B - Database Administration
- C - Solutions Architecture
- D - Program Management
- E - Technical Support
- F - Security Management

Pre-qualified “pools” of vendors (“Members”) in each category are eligible to bid on subsequent, agency-developed Invitation for Bids (“IFB”) containing project-based Statements of Work (“SOW”). Currently, seventy-seven (77) vendors have been pre-qualified for one or more skill categories.

Currently, a basic “terms and conditions” contract has been established between the State and most of the pre-qualified vendors for an approximately five (5) year period, beginning in Fall 2016 and ending June 30, 2021, renewable for an additional sixty months. Establishing the vendor pools and reaching agreement on these basic term and condition (“T&C”) contracts is anticipated to reduce the time for issuing IFBs/SOWs, reviewing bids, and processing contracts resulting from future ITRP IFBs.

This document provides guidance for the specific procedures that must be used by agencies to determine whether they can utilize the ITRP contracting tool and if so, how they may do this. DoIT welcomes the opportunity to assist agencies in considering this option, and encourages continuing agency feedback and suggestions for program improvements.

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# **ITRP Resource Contracting**

## **Essential Features, Conditions, and Requirements**

### **Purpose**

ITRP contracting is designed to provide agencies with necessary temporary and specific term resource capacity for project work over and above normal workloads to meet the State's Information Technology (IT) development, maintenance and enhancement needs.

ITRP contracting will be open to all State Agencies. If an agency's project is approved, the agency will issue an IFB containing a SOW seeking to obtain resources provided by pre-qualified Members. The agency's objective will be to execute contracts with one, or possibly up to three, responsive and responsible Members. The State reserves the right to award a single or a multi-tiered award. A multi-tiered award may be made to a maximum of 3 Members; a primary, secondary or tertiary Member. If the State intends to make a multi-tiered award, then the IFB must state so at the time of solicitation or only a single award will be allowed.

### **Enhanced IT Governance Required**

- Proposed ITRP projects will adhere to the Enhanced IT Governance review and approval process using the Enterprise Portfolio Management ("ePMO") portal.
- This enhanced IT Governance review process will examine both the substance of the IT request, and if approved, assess whether the need could be suitably met by using another resource (e.g., internal resources, other existing or new contracts, etc.).

### **Permitted Uses of ITRP Contracting Resources**

- ITRP contracting is to acquire resources to meet agency needs for specific, well-defined projects.
- ITRP resources are not to be used for staff augmentation.
- Projects should be of fixed duration, and/or requiring skills not possessed by existing state personnel.

### **Possibility of Using Other Procurement Mechanisms to Acquire IT Resources**

- While ITRP contracts will be a valuable tool to meet IT resource needs, agencies are still allowed to request other procurement mechanisms to satisfy a need for qualified technical resources.

### **Multi-Tier Contracting Available**

- Agencies may award a single or a multi-tiered award. A multi-tiered award may be made to a maximum of 3 Members; a primary, secondary or tertiary Member. If the State intends to make a multi-tiered award, then the IFB must state so at the time of solicitation or only a single award will be allowed.

## **ITRP Resource Contracting**

### **Essential Features, Conditions, and Requirements**

#### **Inadequately Performing Contractors May Be Replaced**

- Agencies can determine if Member performance is inadequate, ask for the Member to provide alternate resources to “cure” the problem, and if necessary and approved by procurement officials, revert to the Member who submitted the second lowest bid for that IFB.
- If entering into a multi-tier contract, and the primary Member’s resource is unable to complete the tasks required by the IFB SOW, the agency may revert to the secondary then tertiary Members to obtain a qualified resource.
- An agency may, at its sole discretion, terminate only the affected portion(s) of the applicable SOW or the entire remainder of the engagement.

#### **Agency Feedback on Vendor Performance / Possible Removal from Member Pool**

- Agencies will have an opportunity to provide feedback on vendor performance.
- Three (3) instances of poor vendor performance could ultimately lead to the Member being disqualified from bidding on IFBs until and unless it successfully applies for re-qualification.

#### **Annual Opportunities Available for New Vendors to Become Pre-Qualified Members of IT Skill Category Pools**

- The current pre-qualified vendor pool participation term will be for an approximately five (5) year period, beginning in Fall 2016 and ending June 30, 2021, renewable for an additional sixty months.
- On an annual basis, vendors will have the opportunity to apply to join the pre-qualified vendor pool. It is the State’s goal to maintain a diverse and robust vendor pool for Agencies to work with.
- An up-to-date list of pre-qualified vendors and the skill categories for which they are pre-qualified will be made available to both internal and external stakeholders on the DoIT website.

#### **Small Business Set-Aside (SBSA)**

- On projects with an estimated value of \$500,000 or less, preference will be given to pre-qualified Members who are registered Illinois Small Business vendors pursuant to 30 ILCS 500/45-45.
- These projects will be solicited to SBSA ITRP pre-qualified Members first. If the State is unable to make an award to one of the SBSA ITRP pre-qualified Members within a skill category, the project will be re-solicited so that all pre-qualified Members (SBSA and non-SBSA) may bid on the IFB.
- Waivers to the SBSA procurement process may be granted by the Chief Procurement Officer – General Services (“CPO-GS”).

## **ITRP Resource Contracting**

### **Essential Features, Conditions, and Requirements**

#### **Security Requirements**

- Member personnel must abide by State and agency security regulations, policies and standards regarding security of information systems resources. This may include background checks and compliance with other security requirements as a condition of the contract.

#### **Inspection of Members' Work / Correction as Needed**

- All work performed shall be subject to inspection and acceptance by the State.
- Any inspection or approval of the work performed by a Member does not forfeit the right of the State or agency to require the correction of any faulty workmanship or material.

#### **Billing Records / Tracking and Reporting / No Reimbursement without Authorization if SOW Hours are Exceeded**

- Records of all authorized hours billed by each Member resource must be maintained by the agency and the Member.
- Member hours billed for a project must not exceed the number of hours authorized in the applicable SOW; no payment shall be made for any hours that exceed the maximum number of hours in an approved SOW without a written change order.

# ITRP Resource Contracting

## **Step-by-Step Guide**

### 1. Agency Determines IT Resource Need

Agencies will follow current internal policies and procedures in determining their IT needs.

#### Permitted Uses of ITRP Contracting Resources

- ITRP contracting may be used to acquire IT resources to meet agency needs for **specific, well-defined projects**.
- ITRP resources are **not to be used for staff augmentation**.
- ITRP projects should be of fixed duration, and/or **requiring skills not possessed by existing state personnel**.

Governance will use the following guidelines to determine if a project is appropriate for ITRP resources:

Non-Bargaining Unit Work – ITRP contracting may be allowed if the same or comparable work is not arguably performed by bargaining unit employees.

#### Bargaining Unit Work:

If work can be performed by bargaining unit employees, the proposed project could possibly be approved for ITRP contracting if it fits into one of the following categories:

- Time Limited Work – Work based on one of the following exceptions:
  - Emergency Work
  - Temporary or Seasonal Work
  - No Appropriate (state employee) Eligible List
- Time Limited Projects - The work to be performed is for time limited projects required to meet certain agency mandates for which specific funds have been dedicated.
- Specialized Professional – The work to be performed requires specialized, professional or technical services which cannot reasonably be provided by existing State employees.

Appendix B lists (as of March 1, 2017) the seventy-seven (77) pre-qualified Members, and the skill categories for which they are currently qualified. This indicates the number of Members currently pre-qualified to perform work in each skill category. However, **ONLY** those vendors who have successfully entered into terms and condition (“T&C”) contracts with the state will be permitted to bid on ITRP IFBs.

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#### 2. Submit ITRP Resource Request for Enhanced IT Governance Review

Enhanced IT Governance will examine both the substance of the ITRP request, and if approved, whether the need could be suitably met either by using internal resources, or by utilizing one or more procurement methods.

The Enhanced IT Governance review process is as follows:

##### 1. Submit project/initiative request:

Agencies will use the Enterprise Portfolio Management (ePMO) portal to submit projects:

<https://gov.portal.illinois.gov/sites/epm>

A new field has been added to the ePMO project initiation screen, which requires requestors to select the Procurement Approach they are seeking for their IT project. For ITRP requests users MUST select "ITRP/IFB" from the drop down menu.

Additionally, in order for the IT Governance team to determine whether an ITRP request is for **specific, well-defined projects**, that are **not staff augmentation**, and **require skills not possessed by existing state personnel**, requestors must provide answers to the following questions under Project Description:

1. Whether the anticipated work falls under Bargaining Unit work?
2. If No, then the ITRP should be an appropriate procurement method.
3. If Yes, include one of the exceptions, listed above in red, that allow for the use of the ITRP. We ask that you be as specific as possible in explaining why an exception applies.
4. List any of the six skill categories that are being requested. We ask that you specify why an IT project requires each requested skill category.

PLEASE NOTE: This explanation must be included in the project description before a project is submitted for IT Governance review. If the proper explanation for an ITRP request is not included upon project submission in the ePMO, the ITRP request will be rejected and require resubmission once the necessary information is included.

##### 2. ITRP Response from ePMO:

As ITRP projects are submitted in the ePMO portal an Enhanced IT Governance review is automatically triggered and a determination will be made on whether the ITRP procurement approach is appropriate. An email communication will be sent to the agency project manager and business owner with this determination.

An ITRP request may be approved, rejected outright or rejected with a request to

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### **Step-by-Step Guide**

provide additional information. If the ITRP/IFB procurement request is rejected, the ePMO procurement approach drop-down menu will be defaulted to N/A. At that time the requestor may either:

1. Provide additional information clarifying why the ITRP/IFB approach is appropriate and re-select "ITRP/IFB" from the procurement approach drop-down menu. This will re-start the workflow approval process outlined in slide 10.
2. Select a different procurement approach, such as an RFP.

A complete history of the request and approval process is captured and transparent for each project in the ePMO.

PLEASE NOTE: Approval or rejection of the ITRP/IFB procurement approach does not signify a project's status in IT Governance. These are separate but related approval work streams that occur simultaneously. Even if an IT project's ITRP/IFB procurement approach request is rejected, the project will continue being reviewed by the IT Governance team.

Before an IT project can exit Gate 3 of IT Governance, the Procurement Approach will need to be properly updated in the ePMO with an alternate procurement approach.

# ITRP Resource Contracting

## Step-by-Step Guide

### Alignment of “Gates” With Procurement/Contracting

<b>Governance phase</b>	<b>Gate entry criteria</b>	<b>Gate exit criteria</b>
Gate 1: Conceptual/Idea phase	A basic concept/idea that describes the requirement Specification of preferred procurement approach (including ITRP multi-step contracting request)	Determination of a Need/procurement to move forward
Gate 2: Need/PBC confirmation	Successful exit from Gate 1 + Business Case/high-level requirements or SOW	Determination if the project can proceed with Procurement such as RFP, IFB, ITRP or Work order against an existing Contract
Gate 3: Requirements/RFP/Work order validation	Successful exit from Gate 2 + Technical requirements section from the RFP/IFB or SOW detailed requirements Preferred Procurement Approach selection finalized in the ePMO	Determination if the project can proceed with procurement or internal effort
Gate 4: Design/Architecture validation	Successful exit from Gate 3 + Technical Design & Blueprint and Architecture documentation	Determination if the project is aligned with the Enterprise Architecture standards at the State
Gate 5: Deployment readiness validation	Successful exit from Gate 4 + Pre-Implementation Technical Deployment Readiness documentation	Determination of readiness to Implement the System in Production

If the request is approved, and the decision is to utilize ITRP Contracting, then agencies will perform the following steps.

3. Business Case Development and Submission (currently Remedy/PBC – to be replaced by BidBuy)

Agencies will prepare and submit all the usual and customary required procurement information for their IT requests in the appropriate procurement system.

Agencies will need to specify the ITRP Governance decision that identified ITRP as the appropriate method for obtaining needed IT resources.

Additionally, agencies will need to list any of the six skill categories that are being requested for their project. This initial selection can be changed as the procurement request is developed, but will need to be set before issuance of the IFB.

If the PBC lists an ITRP as being approved through Governance, PBC approvers will check the ePMO system and review the original ITRP request to ensure it is in synch with the PBC request. We are working to automate this review between the ePMO and new Bid Buy system.

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Illustrative skill category examples of Member experience and types of projects performed is provided in Appendix A.

#### 4. Scope of Work/IFB Development

As with any solicitation, agencies will prepare a scope of work that identifies the expected purpose/goals, deliverables, milestones, and related expectations.

The IFB/SOW must identify the specific agency need and include detailed information that will describe the type of services necessary to complete the proposed project. This will be developed to allow Members to respond in a manner that can be reviewed in a “met” or “not met” process;

In order to ensure Members are aware of what services are being requested, agencies must identify those skill categories they will need to perform the project work detailed in each specific IFB/SOW, as well as a list of the Position Names requested under each Skill Category, and the number of resources requested for each Position.

Finally, in order to help successfully evaluate Members’ bids, we encourage agencies to include estimates of hours needed for each specific IFB/SOW.

## Appendix A

### ITRP Resource Contracting - Illustrative Member Experience and Types of Work Performed -

#### 5. IFB Issuance/Bidding Process

Agencies will issue IFBs containing their project-specific SOW by posting the solicitation to the Illinois Procurement Bulletin (“IPB”) or BidBuy.

ITRP IFBs are specific to ITRP projects and as such the ITRP IFB template MUST be used when procuring these services. The ITRP IFB template be made available through the DoIT Procurement Office.

Bids are only allowed from pre-qualified Members in the IT skill categories called for in a particular project that have executed a T&C contract with the State. If a project calls for more than one skill category, only those Members who are pre-qualified for each skill category called for by that projects will be permitted to bid on the IFB/SOW.

Agencies must attach a list of all Members eligible to participate when publishing the ITRP IFB.

If a bidder is not a pre-qualified Member, or not pre-qualified in all the IT skill categories requested at the time of bid due date, their bid will be rejected.

#### Small Business Set-Aside (SBSA)

On projects with an estimated value of \$500,000 or less, preference will be given to pre-qualified Members who are registered Illinois Small Business vendors pursuant to 30 ILCS 500/45-45.

These projects will be solicited to SBSA ITRP pre-qualified Members first. If the State is unable to make an award to one of the SBSA ITRP pre-qualified Members within a skill category, the project will be re-solicited so that all pre-qualified Members (SBSA and non-SBSA) may bid on the IFB.

Waivers to the SBSA procurement process may be granted by the Chief Procurement Officer – General Services (“CPO-GS”).

#### Multi-Tiered Award

Agencies may award a single or multi-tiered award. A multi-tiered award may be made to a maximum of 3 Members; a primary, secondary and tertiary Member.

These Members may work concurrently as secondary and tertiary Members may be tasked to perform work if the primary Member cannot provide the necessary IT resources to perform the work in the SOW.

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If the State intends to make a multi-tiered award, then the IFB must state so at the time of solicitation or only a single award will be allowed.

#### Annual vendor Pre-qualification

The current pre-qualified vendor pool participation term will be for an approximately five (5) year period, beginning in Fall 2016 and ending June 30, 2021, renewable for an additional sixty months.

On an annual basis, vendors will have the opportunity to apply to join the pre-qualified vendor pool. It is the State's goal to maintain a diverse and robust vendor pool for Agencies to work with.

An up-to-date list of pre-qualified vendors and the skill categories for which they are pre-qualified will be made available to both internal and external stakeholders on the DoIT website.

#### 6. Contracting with Members

Agencies may award a contract to the Member who submits the lowest cost, responsive and responsible bid to provide the resources specified within the IFB/SOW. The State will consider the information provided and the quality of that information when evaluating the Bid. If the State finds a failure or deficiency, the State may reject the Bid or reflect the failure or deficiency in the evaluation.

1. A responsive bidder is one who submits a bid that conforms in all material respects to the Invitation for Bid, and includes all required forms.
2. A responsible Bidder is one who has the capability in all respects to perform fully the contract requirements and who has the integrity and reliability that will assure good faith performance. Factors that the State may evaluate to determine responsibility include, but are not limited to: financial disclosures, past performance in business or industry, references (including those found outside the Offer,) financial responsibility, capacity to produce or other matters relating to the Bidder's ability to deliver in the quality and quantity within the time and price as specified in the IFB.

If an agency does not consider the price to be fair and reasonable and *negotiations fail to result in an acceptable price*, the agency may choose not to issue an award, or choose to negotiate with the Member which submitted the next lowest priced bid.

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Agencies must demonstrate to the SPO that a pre-qualified bidder with the lowest bid is non-responsive or does not demonstrate the responsibility necessary to deliver in the quality and quantity within the time and price as specified in the IFB. Upon review of this information, the SPO may disqualify a bidder and allow the Agency to move to the next lowest bidder.

DoIT has established basic “Terms and Conditions” contracts with pre-qualified Members. Agencies therefore, will be building upon these “base” contracts by contracting for the provision of resources needed to fulfill project requirements contained in each individual IFB/SOW (milestones, deliverables, costs, and other elements).

In addition, the following will also apply to these contracts:

- Members must provide the products, resources and/or services proposed in their bid through the contract period;
- All services performed by Members shall be subject to inspection and acceptance by the agency. Any inspection or approval of the services performed by a Member does not forfeit the right of the State or agency to require the correction of any faulty workmanship or material;
- If requested, the Member fulfilling a SOW shall participate in a written assessment process, conducted by the State or agency, following the completion of each SOW to determine the performance and efficiency of the resources provided by the Member.
- Members shall abide by applicable State and agency security regulations, policies and standards regarding security of information systems resources. This may include background checks and compliance with other security requirements as a condition of the contract; and,

#### Billing records:

- Invoicing shall be at the completion of the contract unless invoicing is tied in the contract to milestones, deliverables, set in the SOW;
- A record of all authorized hours billed by each Member and its resources shall be maintained by the agency and the Member pursuant to the applicable SOW, and shall not exceed the number of hours authorized in that SOW.
- The vendor *shall not* receive payment for any hours that exceed the maximum number of hours in an approved SOW without a written change order.
- The Member shall comply with all State procedures for tracking and reporting hours worked against hours authorized in the SOW to ensure that the number of hours worked does not exceed the number of hours authorized.
- The agency shall provide the work space, equipment, software and supplies

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necessary for the Member and its resources to perform their assigned duties, unless otherwise agreed to in writing by the agency.

- Members agree that the State of Illinois is the owner of all data maintained on State systems.

#### 7. Post-Contracting:

##### Unacceptable Member Performance – Replacement Resources

If the lowest cost, most responsive and responsible bidding Member provides a resource(s) that is unable to complete the tasks required by the IFB SOW, the agency may, at no cost, request the replacement of the resource upon discovery of the unacceptable performance.

The agency must make this determination within 14 calendar days of the resource beginning work or a mutually agreed upon timeframe that shall be memorialized in the SOW.

It is advised that agencies work with their Agency CIOs to devise skills assessments to ensure that ITRP vendors skill levels match the Agencies needs within the first week of onboarding these resources. This should give the agency time to address performance issues with a resource and troubleshoot whether a replacement is necessary before the 14 day “probation period” ends.

The Member must identify the replacement resource within five (5) business days, exclusive of any required background checks.

The winning Member will have one opportunity to replace the resource with an acceptable resource that meets the agency’s needs. Subject to the oversight of the State Purchasing Officer, if the Member’s second attempt is unsuccessful the agency is allowed to move to the Secondary Member for a multi-step contract or the Member who submitted the second lowest bid for that IFB.

A Member will not be compensated for any product or service that was found to be unacceptable by the agency. The agency must provide documentation of why the resource, service, or product was found unacceptable and shall submit this documentation for approval to the designated Agency Purchasing Officer and State Purchasing Officer for that agency before being allowed to move to the second lowest bidding Member.

##### Disqualification of Member from Submitting Bids Due to Repeated Non-Performance

- Subject to the oversight of the State Purchasing Officer, if a Member is the lowest

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priced, responsive and responsible bidder and cannot provide the resources as requested in the IFB SOW on three separate occasions, the Member could ultimately be disqualified from bidding on IFBs until and unless it successfully applies for re-qualification.

### **Skill Category Titles**

Skill Category A – Application Development
Skill Category B– Database Administration
Skill Category C– Solutions Architecture
Skill Category D– Program Management
Skill Category E – Technical Support
Skill Category F – Security Management

### **Illustrative Vendor (“Member”) Experience and Projects By Skill Category**

#### **Category A - Application Development**

##### Member Experience:

Members have experience providing resource for application development in areas including such positions as Website Designer, Web Developer, Mobile Developer, SharePoint Developer, MS Access Developer, Adobe Developer, Software Developer, Senior Software Developer, Fleet System Developer, Application Deployment: Microsoft Dynamics CRM, Remedy System Developer, Remedy Force Developer, Mainframe Software Developer, Mobile Application Developers.

##### Examples of Types of Work Performed by Members Include:

- Design the Information Architecture as well as the overall look and feel of a website, and the ability to gather, create, transform, or otherwise manipulate the content in order to allow it to be displayed. Skills include conversion to, and working within, the State’s Web Content Management framework (i.e., SharePoint); collection and organization of the site’s informational content (e.g., documents and graphics); and the ability to convert content into a form that can be displayed within a web browser using HTML, CSS, and JavaScript.
- Perform complex software application analysis, design, development, programming, testing and maintenance of websites as well as web- enabled

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software applications. Skills should include software analysis, design, and development, as well as troubleshooting, diagnosis and repair of software defects, including the ability to perform the technical functions necessary to develop and integrate new web components, as well as implement software upgrades, enhancements, data migrations, system integrations, and other operational activities necessary to support the State's software systems and applications architecture.

- Perform complex software application analysis, design, development, testing and maintenance of websites as well as software applications for mobile platforms. Skills should include software analysis, design, and development, as well as troubleshooting, diagnosis and repair of software defects; these should include the ability to perform the technical functions necessary to develop and integrate new web components, as well as implement software upgrades, enhancements, data migrations, system integrations, and other operational activities necessary to support the State's software systems and applications architecture.
- Perform complex software application analysis, design, development, programming, testing and maintenance of SharePoint applications as well as web-enabled software applications. Skills should include software analysis, design, and development, as well as troubleshooting, diagnosis and repair of software defects, including the ability to perform the technical functions necessary to develop and integrate new web components, as well as implement software upgrades, enhancements, data migrations, system integrations, and other operational activities necessary to support the State's software systems and SharePoint architecture.
- Maintain and convert (to .Net SQL) existing Microsoft Access software applications. This includes the ability to perform complex software application analysis, design, development, programming, testing and maintenance on multiple versions of MS Access. Skills should include software analysis, design, and development, as well as troubleshooting, diagnosis and repair of software defects, including the ability to perform the technical functions necessary to develop and integrate new features and functions, as well as implement software upgrades, enhancements, data migrations, system integrations, and other operational activities necessary to support the State's software systems and applications architecture.
- Perform complex software application analysis, design, development, workflow design, programming, workflow development, testing and maintenance using Java programming language. Skills should include software

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analysis, design, and development, as well as troubleshooting, diagnosis and repair of software defects, including the ability to perform the technical functions necessary to develop and integrate Java-based applications, as well as implement software upgrades, enhancements, data migrations, system integrations, and other operational activities necessary to support the State's software systems and applications architecture. The resource must be familiar with and able to develop applications which are compliant with the standards set forth in the Illinois Information Technology Accessibility Act (IITAA).

- Perform complex software application analysis, design, development, programming, testing and maintenance on the specified technology platform. Skills should include software analysis, design, and development, as well as troubleshooting, diagnosis and repair of software defects, including the ability to perform the technical functions necessary to implement software upgrades, enhancements, data migrations, system integrations, and other
- Perform complex software application analysis, design, development, programming, testing and maintenance on the specified technology platform. Skills should include systems analysis and design expertise, competency in leading software application development projects, capability to train and mentor junior developers, experience in complying with various methodologies, and the ability to create and execute software applications within specified software platforms and architectures utilizing the State's standardized tools, techniques, and methodologies.
- Undertake complex software application analysis and comprehensive system design on the AssetWorks Fleet Management technology platform and be responsible for delivering solutions on-time and on-budget. The resource must also be able to analyze, design and develop code based upon new requirements and customize new or existing Fleet and Fuel Management applications. Skills should include systems analysis and design expertise, competency in leading software application development projects, capability to train and mentor junior developers, experience in complying with various methodologies, and the ability to create and execute software applications within specified software platforms and architectures utilizing the State's standardized tools, techniques, and methodologies.
- Perform complex software application analysis, design, development, programming, testing and maintenance of Microsoft Dynamics CRM applications. Skills should include software analysis, design, and development, as well as troubleshooting, diagnosis and repair of software defects, including the ability to perform the technical functions necessary to develop and

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integrate components, as well as implement software upgrades, enhancements, data migrations, system integrations, and other operational activities necessary to support the State's software systems and Microsoft Dynamics CRM architecture.

- Undertake complex Remedy development efforts, and be responsible for delivering solutions on-time and on-budget. They must be capable of defining technology architecture, creation of strategic roadmaps, technical assessments, and project planning. They must also be able to analyze, design and develop new requirements; customize new or existing ITSM applications; and upgrade ITSM applications from an earlier version using the ARS development environment. The resource must be able to architect solutions in BMC Remedy Action Request System (ARS) as well as the ITSM suite, CMDB, SRM, Mid-Tier and related tools. The resource should also be able to develop Crystal Reports and deploy in Crystal Enterprise Server in support of an upgrade project; integrate various external integration tools with ARS (e.g. - SMS, LDAP, Business Objects, and Mobile Device Platforms) in support of an upgrade project.
- Establish help desk specifications by conferring with users; analyzing workflow, access, information, and security requirements to maintain the system structure. Develops and maintains naming conventions of pick lists, report folders, dashboards, etc. to improve system usability. Maintains updated system documentation and Remedyforce/Salesforce policies & procedures. Manages all system access and security settings. Conduct regular security/configuration audits. Tests and Executes all configuration changes. Performs new release evaluations with business owner & executes new functionality roll-outs. Regularly audits data to uncover data integrity issues and/or opportunities for process improvement. Performs manual or automated data entry/data clean-up as required. Performs mass data imports using the API or Salesforce import tool. Manages all new user set-ups and deactivation; ensures proper license utilization. Manage Pentaho integration between Atrium and our RemedyForce CMDB. Lead integration efforts between solutions such as, Microsoft Active Directory, BMC's Atrium, RemedyForce, BlueStripe, Zabbix, and other systems configuration and deployment utilities to use CMDB data. Manages and implements customization requests by the business, including but not limited to:
- Creating workflow rules for Incident, Problem, Knowledge, Change, Request and Service Level Management; workflow alerts; automated email responses; approval processes related to Change Management and Request Management. Creates and maintains all IT help desk templates; Creates and maintains

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#### - Illustrative Member Experience and Types of Work Performed -

Knowledgebase; Creates and maintains Reports and Quick Views; Creates and maintains Remedyforce CMDB along with Configuration Item relationships; Creates and maintains the service catalog within Remedyforce; Creates and maintains all service level and operational level agreements, along with underpinning contracts within Remedyforce; Creates and maintains all Service Requests within Remedyforce; Sets up useful links within Self Service and Remedyforce; Modifies the sharing model as required; Creates and manages email alert and email templates; Creates custom fields and modifies pick list values; Creates and maintains queues; Creates and maintains Chatter; Creates and maintains Accounts, Statuses, the Category Tree, Impact, Urgency & Priority Matrix development concepts, principles, theories and functions supplemented by at least four years of professional experience in software application development. Specialized skills include Remedy, RemedyForce, Salesforce and related technologies.

- Define, analyze, and document business processes and articulate business requirements to document the desired functionality within information technology business solutions. Perform complex software application analysis, design, development, programming, testing and maintenance on the specified technology platform. Skills should include significant competence in Business Process Management and related disciplines and the technical skills necessary to capture, analyze, and report these requirements utilizing the State's standardized tools and techniques; software analysis, design, and development; troubleshooting, diagnosis and repair of software defects; the ability to perform the technical functions necessary to implement software upgrades, enhancements, data migrations, system integrations, and other operational activities necessary to support the State's software systems and applications architecture.
- Assume direct responsibility for researching, planning, coordinating and recommending software and system choices to meet an organization's business requirements. Perform complex software application analysis, design, development, programming, testing and maintenance on the specified technology platform. Skills should include systems analysis and design expertise, competency in leading software application development projects, capability to train and mentor junior developers, experience in complying with various methodologies, and the ability to create and execute software applications within specified software platforms and architectures utilizing the State's standardized tools, techniques, and methodologies.

#### **Category B - Database Administration**

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#### - Illustrative Member Experience and Types of Work Performed -

##### Member Experience:

Members have experience providing resource for database administration areas including such positions as: Database Designer; Enterprise Data Administrator; Enterprise Data Architect; and, Information Exchange Package Document (IEPD) Developer.

##### Examples of Types of Work Performed by Members Include:

- Design, implement and maintain complex production- level database designs and related documentation, including detailed data models, and data flow diagrams for specified database architectures. Evaluate and configure various Database Management System (DBMS) products to match user requirements with system capabilities; determine file organization, indexing methods, and security procedures for system databases; and plan and coordinate data analysis, conversion and migration of existing databases to state of the art DBMS's.
- Design, implement, maintain, tune and repair enterprise data exchanges and data repositories, including creating Data Exchanges, Mapping ERP, Best of Breed, and Legacy data stores to the NIEM Federated Data Model; Mapping Physical Database fields to the Exchanges; identifying and migrating legacy data; coordinating Data Transformation, and creating and executing a Legacy Data Archival Plan. Must have significant experience and expertise in optimizing the performance of multiple and potentially diverse databases utilized by software systems and applications.
- Optimize data assets across the enterprise as well as ensure the database architecture is designed to support the organization's strategic goals. Primary duties include establishing Data Architecture as-is and to-be diagrams; defining and maintaining an Enterprise Data Model; managing comprehensive Metadata and Data Dictionary; establishing Data Retention and Archival standards; identifying and maintaining appropriate controls to ensure the privacy, security and integrity of enterprise data; and coordinating Enterprise Data Exchange Services. The enterprise data architecture covers databases, data integration, and the means to readily access the data (typically the Enterprise Data Architect achieves these goals by setting organizational data standards). Skills and experience should include the ability to define the enterprise data architecture vision, strategy, principles, and standards and the ability to produce a comprehensive data management framework for the enterprise.
- Manage data assets throughout the enterprise. Primary duties include creating

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#### - Illustrative Member Experience and Types of Work Performed -

and testing Information Exchange Package Documents (IEPDs) to support an Enterprise Data Clearinghouse and Master Data Repository; and creating Data Conversion scripts to enable Data Exchanges, including performing all Extraction, Transformation, and Loading (ETL) and related activities. Additional duties will involve contributing technical expertise associated with sustaining accurate and timely data flow between various components of the enterprise application portfolio.

### **Category C - Solutions Architecture**

#### Member Experience:

Members have experience providing resource for solutions architecture areas including such positions as: Microsoft Solution Architect; IBM Solution Architect; Adobe Solution Architect; Enterprise Content; Management Architect; Business Intelligence/Data Architect, SAP Enterprise Resource Planning Architect; Enterprise Resource Planning (ERP) System Integration Architect; Governance, Risk and Compliance Architect; and, Enterprise Change Management Solution Architect.

#### Examples of Types of Work Performed by Members Include:

- Lead complex Microsoft development efforts, and be responsible for delivering solutions on-time and on-budget. Configure Microsoft Visual Studio (MVS), Team Foundation Server (TFS) and other Ultimate Developer tools to align with methodology and optimize development efforts. Define enterprise architecture, creation of strategic roadmaps, developing technical solutions/assessments, and project planning. Installing and configuring Windows Server and IIS Server. Use technical competency and operational experience with the entire Microsoft development stack including authentication and authorization. Be responsible for installing and configuring SharePoint Services Server; in-depth knowledge and expertise with development processes, roles, and techniques; in-depth knowledge and expertise with Windows Workflow, and MSBuild.
- Conceptualize, define, and implement an end-to-end IBM-based solution architecture suitable for business unit or enterprise deployment. Be responsible for implementing solutions utilizing Asset Analyzer, System Architect, Policy Tester, AppScan and other Rational Suite analysis and development tools. Responsible for evaluating and recommending alternatives for meeting both the short-term and the long-term needs of the business unit. Responsible for drive the definition and validation of the overall solution

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architecture (including Infrastructure, Application, Data, and Business Process architecture, and the Operations and Support solution approach) necessary to establish a cost-effective, scalable and robust business solution.

- Conceptualize, define, and implement an end-to-end Enterprise Content Management solution suitable for business unit or enterprise-wide deployment. Use experience in designing business unit and enterprise taxonomies, indexing strategies, and metadata optimization, as well as integration with various graphical user interfaces. Responsible for evaluating and recommending alternatives for meeting both the short-term and the long-term needs of the business unit. Use experience to drive the definition and validation of the overall solution architecture (including Infrastructure, Application, Data, and Business Process architecture, and the Operations and Support solution approach) necessary to establish a cost-effective, scalable and robust business solution.
- Conceptualize, define, and implement end-to-end Business Intelligence/Data Analytics solutions suitable for business unit or enterprise-wide deployment. Utilize skills and experience in analyzing virtualized data across multiple, disparate data sources and presenting that data via a common graphical user interface. Responsible for evaluating and recommending alternatives for meeting both the short-term and the long-term needs of the business unit. Be able to drive the definition and validation of the overall solution architecture (including Infrastructure, Application, Data, and Business Process architecture, and the Operations and Support solution approach) necessary to establish a cost-effective, scalable and robust business solution.
- Conceptualize, define, and implement end-to-end SAP Enterprise Resource Planning solutions suitable for business unit or enterprise-wide implementation and deployment. Responsible for analyzing and reconciling existing legacy business processes to conform to industry Best Practice business processes; configuring SAP business functions to accommodate specific agency requirements; and selective remodeling of Best Practices (as appropriate). Responsible for evaluating and recommending alternatives for meeting both the short-term and the long-term needs of the business unit. Utilize expertise necessary to drive the definition and validation of the overall solution architecture (including Infrastructure, Application, Data, and Business Process architecture, and the Operations and Support solution approach) necessary to establish a cost-effective, scalable and robust business solution.
- Conceptualize define, configure, and implement end-to-end Enterprise Resource Planning (ERP) solutions suitable for business unit or enterprise-wide implementation and deployment. The Resource should have specific knowledge

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#### - Illustrative Member Experience and Types of Work Performed -

and experience in transforming and integrating existing legacy applications and system interfaces both to sustain System of Record accountability and maintain operational stability as well as to accommodate industry Best Practice business processes; configuring system, software and database interfaces to accommodate specific agency or enterprise requirements; including selective integration of legacy applications with their ERP Best Practice counterparts. The Resource should be capable of evaluating and recommending alternatives for meeting both the short-term and the long-term needs of the business unit. The Resource should possess the experience and expertise necessary to drive the definition and validation of the overall solution architecture (including Infrastructure, Application, Data, and Business Process architecture, and the Operations and Support solution approach) necessary to establish a cost-effective, scalable and robust business solution.

- Conceptualize, define, configure, and implement end-to-end enterprise-level Governance, Risk and Compliance solutions suitable for business unit or enterprise-wide implementation and deployment. Use knowledge and experience with applicable State and Federal Governance, Risk and Compliance standards, regulations and legislation. Accommodate specific agency or enterprise requirements; including transformation of legacy applications into ERP Best Practice business processes and applications. Evaluate and recommend alternatives for meeting both the short-term and the long-term needs of the business unit. Drive the definition and validation of the overall solution architecture (including Infrastructure, Application, Data, and Business Process architecture, and the Operations and Support solution approach) necessary to establish a cost-effective, scalable and robust business solution.
- Design, implement and sustain effective Enterprise Change Management systems and methodologies, in support of multiple system integrators, while participating in the iterative configuration of end-to-end Enterprise Resource Planning (ERP) solutions suitable for business unit or enterprise-wide implementation and deployment. Translate complex and often overlapping business requirements into precise specifications necessary to transform business unit and enterprise business processes into industry Best Practices, through multiple iterations and releases, while sustaining efficient and effective business operability at all times. Demonstrate knowledge and expertise throughout the entire System Development Life Cycle, including design, development, testing, and implementation. Evaluate and recommend alternatives for meeting both the short-term and the long-term needs of the business unit or enterprise. Drive the definition and validation of the overall solution architecture (including Infrastructure, Application, Data, and Business Process architecture, and the Operations and Support solution approach)

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necessary to establish a cost- effective, scalable and robust business solution.

#### **Category D - Program Management**

##### Member Experience:

Members have experience providing resources for program management areas including such positions as: Project Manager; Program Manager, Jr.; Business Analyst, Sr.; Business Analyst; Computer Engineer / Systems Analyst; and, Enterprise Architect.

##### Examples of Types of Work Performed by Members Include:

- Plan, coordinate, and manage all aspects of assigned information technology projects. Prepare and present status on project schedules, project costs, project deliverables, project risks, and risk containment strategies. Use Project Management disciplines and the technical skills necessary to capture, analyze, and report requirements utilizing the State's standardized tools and techniques.
- Assume direct responsibility for the overall cost, schedule and technical performance of multiple inter-related projects or initiatives. Direct all phases of assigned programs and initiatives from inception through completion to achieve desired business objectives and organizational strategies. Serve as primary communicator to executive leadership, various levels of management, technology partners and key customers, (e.g., leading program review sessions with customers to discuss cost, schedule, and technical performance).
- Define, analyze, and document business processes and articulate business requirements to document the desired functionality within information technology and/or telecommunications based processes or business solutions. Use Business Process Management and related disciplines and the technical skills necessary to capture, analyze, and report requirements utilizing the State's standardized tools and techniques (currently Visio and Provision). Define business objectives, interact with stakeholders, elicit requirements, conduct independent research (for design basis), and apply analytical thinking (to solve problems), visualize systems and processes via graphical representations, and attention to detail (for documentation and testing).
- Assume direct responsibility for researching, planning, coordinating and recommending software and system choices to meet an organization's business requirements. Use skills: analytical, technical, managerial, and interpersonal. Identify opportunities and to analyze and solve problems. Understand the potential

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#### - Illustrative Member Experience and Types of Work Performed -

and the limitations of information technology. Work with various programming languages, operating systems, and computer hardware platforms. Work with end users as well as with analysts, programmers, and other systems professionals.

- Translate an organization or enterprise business strategy into an IT systems architecture that will support that strategy. Analytically assess, investigate, interpret and creatively solve complex technical problems. Participating on assigned teams as well as providing specialized assistance to other teams or groups, and participating in defining technology architecture, creating strategic roadmaps and technical assessments, and project planning. Produce technical reports in areas of assigned specialty; to assure that technical, project schedules, quality, and cost objectives are met; to contribute or lead the development of new concepts and improve existing techniques; and to provide guidance to team members. Serve as the primary communicator to executive leadership, various levels of management technology partners and key customers, (e.g., leading program review sessions with customers to discuss cost, schedule, and technical performance).

#### **Category E - Technical Support**

##### Member Experience:

Members have experience providing resource for technical support areas including such positions as Technical Writers; Technology Trainers; Software Quality Assurance Specialists; Production Control Specialist; Data Analytics, IT Research, Management Consulting and other related IT consulting support roles.

##### Examples of Types of Work Performed by Members Include:

- Create new documentation from provided system information, and/or through examination of subject system/procedure, and/or thorough interviewing techniques. Create new documentation from experience and expertise in subject area, to plan and estimate work of a team by phase, and to report work progress of team. Creating online interface documentation and have exposure to interface tools; be able to ensure that proper cross-referencing occurs within the informational units and ensure that the front matter, body and back matter are complete and are formatted correctly; and ensure that the material is presented in a user-friendly manner and that all artwork is reviewed for appropriateness and accuracy.
- Create the general design and delivery of training courses in information and

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#### - Illustrative Member Experience and Types of Work Performed -

communication technology including desktop applications and organization-specific software. Providing training in more technical areas for software engineers, technicians, website designers and programmers.

- Prepare and conduct comprehensive software testing, with substantial experience within the specified technology platform. Work with small, agile teams of software designers, developers, and quality assurance specialists to develop and release high quality, secure, accessible software with a range of experience testing using various web browsers and technology platforms. Software quality assurance processes and best practices rapidly absorb product knowledge, and articulate technical problems to any audience.
- Monitor, manage, and troubleshoot various types of production control methods, including print operations, report generation and distribution, data load and data transfer routines, etc.
- Provide IT research and advisory services and assist agencies with building specifications for solicitations and project planning based on industry-best practices. Provide management consulting for business process re-engineering as well as for service streamlining, identifying new business models, service delivery models, etc.

#### **Category F - Security Management**

##### Member Experience:

Members have experience providing resources for security management areas including such positions as: Information Security Compliance Analyst; Security Vulnerability Analyst; Security Assessor; Application/Data Security Assessor; Disaster Recovery Services Specialist; Information Security Implementation Specialist; PKI Administrative Specialist; PKI Code Implementation Specialist; and, PKI Systems Analyst.

##### Examples of Types of Work Performed by Members Include:

- Assess, analyze, implement and manage information security within a complex

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#### - Illustrative Member Experience and Types of Work Performed -

organization. Ensure compliance within the State's security program regarding privacy, integrity and availability regulations and other applicable state and federal laws, including the Federal Information Security Management Act (FISMA). PCI, PII, FTI, HIPAA, and NIST standards. Development, implementation, maintenance, and compliance with the State's policies, procedures and standards as well as training in security policies and practices. Review the security features of existing and new computing systems to ensure that they meet the security requirements within the organization.

- Detect, identify, and scan for vulnerable nodes and software with a solid background in networking and TCP/IP.
- Assess the various technical components (e.g., servers, databases, logs, web applications) of a compliance/security solution. Use knowledge of PCI, PII, FTI, HIPAA and NIST standards, as well as assessing if security policies and governance processes are sound and being followed. Present findings to Security Managers.
- Oversee software application and data security programs including secure software development lifecycle management and secure data management processes. This may include oversight of agency/enterprise software applications, and creation/revision of agency/enterprise policies and procedures regarding application and data security.
- Oversee disaster recovery project management and processes which may include agency applications, telecommunication equipment and network infrastructure; document disaster recovery testing and results; write and revise agency policies and procedures regarding disaster recovery; and assist Agency security administrator in performing risk assessments and disaster recovery exercises.
- Shape and implement security based on FISMA provisions while specific to State requirements. Implement a system security plan that fully describes the information system (e.g. purpose, capabilities, operating environment, and interconnections with other systems, user characteristics, and privileges). Create a system security categorization schema that can be followed State-wide. Develop a threat analysis process to identify potential dangers that could exploit information system flaws or weaknesses. Develop a process for gathering the appropriate data to define and implement the appropriate system specific and common security controls. Create a system authorization process with related policy and procedures. Develop and implement a risk management framework to be used State-wide to define internal as well as external risks.
- Administer an enterprise PKI environment. Confirm and registering an individual's

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proof of identity for authentication and security purposes.

- Serve as a system analyst specializing in design of solutions utilizing PKI technology. Design systems and programs to achieve desired functionality with PKI as a main component, produce diagrams, develop specifications, and document final solutions in accordance with existing customer standards, and communicate system and program design to both application programmers and business owners.

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### ITRP Resource Contracting

- Members List and Pre-Qualified Skill Categories (as of December. 14, 2016) -

<b>VENDOR NAME</b>	<b>SBSA</b>	<b>Skill Category A Application Development</b>	<b>Skill Category B Database Administration</b>	<b>Skill Category C Solutions Architecture</b>	<b>Skill Category D Program Management</b>	<b>Skill Category E Technical Support</b>	<b>Skill Category F Security Management</b>
<b>22nd Century Technologies Inc</b>		X	X	X	X	X	X
<b>4Consulting Inc (4Ci)</b>		X	X	X	X	X	X
<b>AAI</b>	Yes	X	X		X	X	
<b>Abator Information Services Inc</b>		X	X	X	X	X	
<b>Aim Big Inc</b>		X	X	X	X	X	X
<b>Alert IT Solutions Inc</b>	Yes	X	X	X	X	X	X
<b>ALTEK Information Technology Inc</b>		X	X	X	X	X	X
<b>Ameex Technologies Corp</b>		X		X	X	X	
<b>Ardent Technologies Inc</b>		X	X	X	X	X	X
<b>Arias Information Solutions LLC (AIS)</b>	Yes		X	X	X		
<b>Bourntec</b>		X	X	X	X	X	X
<b>Breakthrough Technologies</b>		X		X	X		
<b>Catalyst Consulting Group Inc</b>	Yes	X	X	X	X	X	

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<b>CGI (Consulting Group Incorporated)</b>		X	X		X	X	
<b>CGN &amp; Associates Inc</b>		X		X	X	X	
<b>Chicago Advisors LLC</b>		X	X	X	X	X	
<b>Computer Aid Inc (CAI)</b>		X	X	X	X	X	X
<b>CSG Government Solutions</b>					X	X	X
<b>Digital Intelligence Systems LLC (DISYS)</b>		X	X	X	X	X	X
<b>Diversified Services Network Inc (DSN)</b>		X	X	X	X	X	X
<b>Electronic Knowledge Interchange Co (EKI)</b>		X	X		X	X	X
<b>Encore Consulting Services Inc</b>	Yes	X	X	X	X	X	X
<b>EnfoTech &amp; Consulting, Inc</b>		X	X	X			
<b>GIS Solutions Inc</b>	Yes	X	X	X	X	X	
<b>GNC Consulting Inc</b>		X	X	X	X	X	X

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<b>IBM (International Business Machines Corp)</b>		X	X	X	X	X	X
<b>Intellisys Technology LLC</b>	Yes	X	X		X	X	
<b>IO Datasphere Inc</b>	Yes	X	X	X	X	X	X
<b>ISG Public Sector</b>					X		
<b>KCI</b>	Yes	X	X	X	X	X	X
<b>Kristine Fallon Associates Inc</b>	Yes				X	X	
<b>KSM Consulting of Indiana LLC</b>		X	X	X	X	X	
<b>Lead IT Corporation</b>		X	X	X	X	X	X
<b>Level-1 Global Solutions LLC</b>					X	X	
<b>LoganBritton Inc</b>		X	X	X	X		
<b>Matrix Systems Group, Inc</b>	Yes	X	X	X	X	X	
<b>METMOX Inc</b>		X	X	X	X	X	X
<b>MSF&amp;W Consulting Inc</b>	Yes	X	X	X	X	X	
<b>National Tek Services Inc</b>	Yes			X	X	X	X

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<b>Paradigm Solutions Inc</b>		X	X		X	X	X
<b>Peritius Consulting Inc</b>					X		
<b>RADgov Inc</b>					X	X	
<b>RL Canning</b>		X		X	X	X	X
<b>Rose International Inc</b>		X	X	X	X	X	X
<b>Savvy Technology Solutions LLC</b>		X	X	X	X		
<b>Scigon Solutions</b>	Yes	X	X		X	X	X
<b>SDA Consulting Inc</b>	Yes	X	X	X	X	X	
<b>SEA Group Inc</b>	Yes	X	X	X	X	X	X
<b>Senryo Technologies</b>	Yes	X	X	X	X	X	
<b>SLG Innovations Inc</b>	Yes	X	X	X	X	X	X
<b>Spruce Technology Inc</b>		X	X	X	X	X	X
<b>Symphony Corporation Inc</b>		X	X	X	X	X	X
<b>Synapsis</b>	Yes	X					
<b>System Soft Technologies Inc</b>		X	X	X	X		

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- Members List and Pre-Qualified Skill Categories (as of December. 14, 2016) -

<b>Taborda Solutions Inc</b>		X	X	X	X	X	
<b>Technosoft Corporation</b>		X	X	X	X	X	X
<b>Viva USA Inc</b>		X	X	X	X	X	X
<b>Wonomi Technologies</b>	Yes	X	X	X	X	X	X
<b>Wynndalco Enterprises LLC</b>	Yes				X		