There are two questions we ask participants to help answer with their workshop contributions:

**Q1: What is the vision for manufacturing to be supported by the IoT, cloud, and service providers?**
- We ask participants to share a presentation of 10-15 slides from their organization’s perspective where
  - Manufacturers may showcase how cloud services are planned to be used to support their needs;
  - Cloud platform and IoT vendors may showcase how their offerings will support manufacturing needs;
  - Cloud services vendors may showcase how they plan to take advantage of cloud platforms to provide needed functionality to the manufacturing enterprises.

**Q2: What are high-priority issues preventing the vision?**
- We ask participants to take a position on one or few high-priority issues and argue for the position by providing, preferably, a smaller collection of slides, summarizing that position
  - Examples of summary slides for two position statements are provided; participants are encouraged to use and/or change the format to support their positions

Organizers plan for participants to deliver 10’-15’ presentation (depending on the number of submissions); participants are encouraged in their presentations to identify and discuss one or more high-priority issues and address as many of the following questions as possible (see the provided summary slides for examples of answers):
- Manufacturing Use Case: What are manufacturing business needs you are addressing?
- Business Challenge: What is the miss-match between the business needs and current business capabilities?
- Business Benefit: What are cost savings and other quantifiable benefits following from addressing the challenge and meeting the need?
- Open Cloud Opportunity: Where can open cloud help address the challenge and help meet the manufacturers’ need?
- Technical Issues and Initiatives: What technical issues prevent the open cloud opportunity to contribute to addressing the business challenge?
- Standards Role: What is the potential role for standards to address the technical issues?

We will use the identified issues to ask participants to vote for top 3 issues among those, allowing us to prioritize the issues. We will discuss the findings of this prioritization.

**Submission Dates:**
- Participants will submit abstracts of their presentations by March 30
- Workshop organizers will confirm planned presentation with participants by April 7
- Participants will send their presentations (10-15 slides), showcasing their organization’s perspective, and their position statement summary slide(s) identifying key issue(s) by April 30
- Organizers will make available presentations and position statement summary slides to all participants ahead of the workshop
Position Statements Summary Slides - Examples
<table>
<thead>
<tr>
<th>Manufacturing Use Case (A Need Description)</th>
<th>Supplier Selection:  OEMs need lots of information about suppliers, such as supplier capabilities, capacities, tolerances, etc.; they would like to use off-the-shelf (OTS), service-based data access</th>
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</table>
| **Business Challenge** | • Cannot do OTS, service-based queries for this information, with desired efficiency  
• Instead, have to get in a dialog with human to collect unstructured data in a manual process and process, interpret, structure the data for the decision making  
• Users -- provide business & technical spec for needed information; Vendors -- implement services for the given spec |
| **Business Benefit of addressing challenge; estimated quantification of benefit** | • If we could enable OTS service-based queries to readily access the required information in a business-to-business mode, we could have drastic reduction in time and cost of data collection  
• More markets and more profits for software and cloud vendors  
• Possible cost saving estimate: By eliminating manual information gathering process (supplier information gathering and identification, manual exchange with supplier POC, supplier information review and interpretation), required time may be cut from 200 man-hours to 10 man-hours per 10 customers |
| **Open Cloud Opportunity** | • Use cloud-based platforms to capture knowledge, manage rules, and orchestrate partner strategy across the value chains of each manufacturing segment |
| **Technical issues & Initiatives** | • Poor methods and tools to develop and maintain terminologies describing manufacturing capability and capacity  
• No known initiatives; only proprietary manufacturing portal terminologies exist |
<p>| <strong>Standards Role</strong> | • Shared terminology development and maintenance across manufacturing industry and segments |</p>
<table>
<thead>
<tr>
<th><strong>Manufacturing Use Case (A Need Description)</strong></th>
<th><strong>Supplier Onboarding:</strong> Needs efficient means of establishing connections between heavily customized MES systems and many other enterprise information systems. More and more, these systems will live in the cloud.</th>
</tr>
</thead>
</table>
| **Business Challenge** | • Current processes to enable connectivity between MES and enterprise systems are inefficient  
• Instead of stream-lined, semi-automated methods, processes rely on manual reconciliation of semantic & syntactic differences between systems |
| **Business Benefit of addressing challenge; estimated quantification of benefit** | • Semi-automated methods to establish connectivity between the MES and enterprise systems may drastically reduce time and cost of application integration  
• Possible cost saving estimate: By eliminating manual reconciliation method (including analysis of proprietary terminology, models, and interfaces, specification and development of service interface converters) required time may be cut from 200 man-hours to 20 man-hours per 1 integration case |
| **Open Cloud Opportunity** | • Use cloud-based platforms, workflows and libraries of shared, best-practices processes to enable semi-automated methods of integration |
| **Technical Issues & Initiatives** | • No methods and tools to provide for stream-lined semi-automated specification and development of workflows, interface converters, and process libraries  
• No known on-going initiatives; some proprietary efforts announced |
| **Standards Role** | • Shared manufacturing model development and maintenance for manufacturing services specification, enabling semi-automated methods of systems integration  
• Methods and tools for evaluating cloud technologies  
• Methods, standards for specifying required semantics & syntax |