

Tuesday  
April 10, 2018

**LOCATION:**

Shilo Inn  
50 Comstock Blvd.  
Richland, Washington

**5:30 p.m.** - Check in/Networking  
and Appetizers

**6:00 p.m.** - Buffet Dinner

**6:45 p.m.** - Presentation

**DINNER BUFFET MENU:**

The Chef and crew at Riverside Catering provide a fine and varied buffet dinner for us at the Shilo Inn. The buffet usually includes two entree choices, plus accompanying vegetable, salad, and dessert.

Your choice of coffee or tea is included with dinner.

**Cost:**

\$20 ASQ members  
\$25 non members  
\$5 presentation only

(cash or check)

Reservations are due April 4.  
E-mail [0614asq@gmail.com](mailto:0614asq@gmail.com)  
with your name, phone number,  
company affiliation, and type of  
reservation.

**Note:** All no shows will be billed  
unless cancelled 48 hours in  
advance.

For more information about our  
ASQ section and other upcoming  
events: [www.asq614.org/](http://www.asq614.org/)

## “Systems Engineering and Requirements Management”



**Phil Townsend**

**Project Engineer, BNI, WTP Project  
INCOSE Certified Systems Engineering Professional**

Systems Engineering has sometimes been described as being at the confluence of Engineering, Quality Assurance and Project Management. One of the key focus areas for Systems Engineering is related to the management of requirements for the design of systems. This includes requirements identification, definition, allocation, tracing, and verification.

Requirements management requires us to identify the myriad sources of requirements, typically beginning with a contract or specification, but also extending to laws, regulations, codes and standards. Often overlooked within traditional Quality Control are the performance requirements that ensure a system, subsystem, or part is able to interface correctly with other systems, sub-systems and parts. For example, how does a computer manufacturer ensure all the components within the “box” integrate properly? How does a software developer ensure that all the sections of code being developed by independent teams of software engineers all integrate, work together properly, and work with existing software and operating systems? The answer is systems engineering and requirements management. The more complex the design-build effort, the more systems engineering and requirements management are needed to ensure success.

The International Council on Systems Engineering (INCOSE) has established best practices, methods and a body of knowledge (similar to the practice of project management) to help guide the practitioners of systems engineering. In the last decade, significant advances have been made in the availability and capability of software tools for use in support of requirements management.

The April 10 presentation will:

- Provide an overview of the INCOSE principles and recommended practices related to requirements management
- Show how the tools of requirements management integrate with QA/QC
- Show how all this helps to ensure that what we design, build and install meets requirements and therefore provides the required quality.

*About the speaker:* Phil Townsend obtained his BS in Mechanical Engineering from Purdue University, and his MS in Engineering Management from WSU Tri-Cities. He served nine years as a US Navy submarine officer, and has worked for various contractors on DOE projects for the last 25 years in operations, maintenance, program management and engineering. For the last 11 years, he has worked various assignments for Bechtel National, Inc. on the Hanford Waste Treatment and Immobilization Plant (WTP) project. He is a Certified Systems Engineering Professional (CSEP) through the International Council on Systems Engineering (INCOSE).