Long Island & Metro NY Chapter

Institute of Industrial Engineers

NEWS-LETTER

IIE-Vol.108 Issue 02 | Gold Award Winner for 11 Straight Years (1997-2008) | Feb., 2009

Calendar of Events

Feb., 26th, 2009 (Thursday)
IIE Feb. Meeting
Topic: Details on right

March 23h, 2009 (Monday)
Topic: TBA

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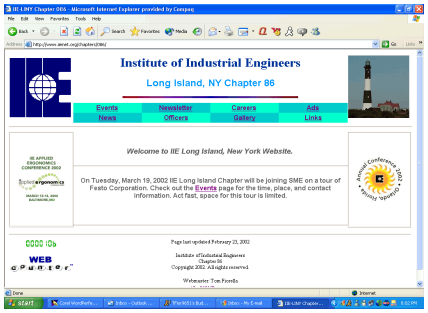
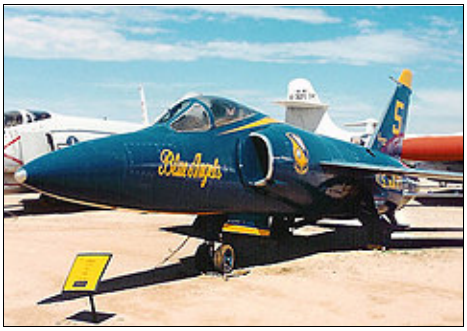


February MEETING

***Thursday,* Feb. 26th, 2009**

Time: Networking/Refreshments - 6pm, Presentation - 7pm
Place: Bethpage Public Library, Meeting Room, Lower Floor
Pizza / refreshments - $5
This is a joint event with the Long Island & NY Chapters of AIAA, **IIE,** & **SME**
RSVP Required *(see back page for RSVP information and directions)*

Topic: **100 Years of Aerospace Heritage on Long Island**
Speaker: Tom Gwynne, VP for Programs, Cradle of Aviation Museum



It would be difficult to exaggerate the significance of Long Island's contributions to our nation's aerospace heritage, yet many Long Islanders are unaware of this fascinating aspect of local history. This presentation will begin with a short overview of the Cradle of Aviation Museum's beginnings, recent accomplishments, and current status. Following this introduction, we'll take a virtual walk through time, stopping briefly at each of the Museum's eight exhibit galleries. Each gallery focuses on a particular time period in the history of aviation on Long Island, including the age of kites, balloons and gliders; the era of swashbuckling air meets; World War I; the period between the world wars; World War II; the jet age; the modern era; and finally the space age. We'll begin our tour almost a hundred years ago, in 1909, with an original Bleriot 11, the first airplane to fly across the English channel, and one with an intriguing Long Island connection, and conclude in the eighth and final gallery, featuring a real Lunar Module. This extraordinary vehicle is one of three LMs, manufactured here on Long Island by Grumman, that were intended to go to the moon, but were never used. At every gallery, we'll focus on a single aircraft or spacecraft, using it to provide a window onto the people and technology of the period in Long Island aviation history it represents.

John T. (Tom) Gwynne was born and raised on Staten Island, attended the Staten Island Academy and subsequently Brown University, where he graduated with a B. A. degree in International Relations. He was then commissioned an officer in the United States Air Force and attended a one-year pilot training program in Alabama. Assigned to a fighter squadron, he served as an F-4 pilot for 6 years, including a combat tour in Vietnam during which he was awarded two Distinguished Flying Crosses and 10 Air Medals.

Tom left the Air Force in 1969 and joined the Grumman Corporation of Bethpage as a consultant on the Apollo Program. In 1972 he joined Grumman's Flight Test Department, and spent the next 15 years test-flying the F-14, A-6, EA-6B, EF-111, OV-1, and Gulfstream III aircraft. In 1989 he was appointed Director of Flight Operations at Grumman's final assembly facility at Calverton, transferring in 1994 to Florida to become Operations Manager of Grumman's St. Augustine facility. After retiring from Grumman in 1997, he joined the Cradle of Aviation Museum as Planning Manager and in 2001 was promoted to the post of Vice President for Programs.

Review of the Jan. Meeting / Webcast

By: Carolyn Chen

The January Meeting was presented by John Boyko, Managing Partner of Summit Business Solutions. The topic was, "Value Stream Mapping -- A Lean Assessment Tool" and was the chapter's first webinar, presented to IIEs in Region 1. The web presentation covered the following topics:

1. The differences between Value Stream Mapping and Process Maps
2. The 8-wastes of Lean
3. How a Value Stream Mapping of the current state is developed
4. How to transform the current state to an ideal or Future State
5. Typical symbols used in Value Stream Mapping
6. How to get started on your own Value Stream Mapping

John Boyko presented the IIE - NE Region webcast topic on Value Stream Mapping.

We are familiar with Continuous Improvement strategies such as Lean and Six Sigma. Lean Enterprise has roots in Industrial Engineering and the goal is to remove waste from a process. Six Sigma has roots in Quality and Statistics and the goal is to reduce variation. Lean Sigma is a newer strategy that blends the best of both worlds. A process is modeled by summarizing the total time for Value Added steps (VA) and non-Value Added steps (NVA). Analyze the NVA, using the 8-wastes of Lean.

To help remember the 8 wastes of Lean - use the acronym DOWNTIME

" Defects / mistakes
" Overproduction
" Waiting
" Not fully utilizing people
" Transporting items / info due to poor process flow (cannot work on anything while it is in transit)
" Inventory Motion
" Extra processing adding non-value added steps

The Lean Improvement Cycle steps are to diagnose, stabilize, strategize, take action, and sustain. You must be able to sustain improvement by coordinating the efforts of Human Resources, leadership, enterprise operations, quality and your vendors otherwise the system will degrade. One tool to analyze the system is Value Stream Mapping. A value stream map is a graphical representation of all the activities required to deliver a product or service. VA and NVA should be included.

Although this sounds similar to a process map, a VSM is different. A Process map is step by step detail of every task. A value map is a high level map that has the flow of information. A process map usually doesn't have information flow. The recommendation is to look in the plant level (as opposed to the raw material level).

The VSM will have a top, middle and bottom level. The top level is drawn from left to right by showing information flow as it starts from the customer, to the manufacturer, to the raw material supplier. The middle level is drawn from right to left by showing material flow delivered from the supplier to the manufacturer, who processes it then delivers it to the customer. The bottom level is a process summary and lead time ladder. The ladder will help compute the manufacturing lead time and the Value Added time.

There are several key points of Value stream mapping. Focus on one product group at a time. Take a two stage approach by looking at current state and the future state. Provide an easy to understand summary on one page. The map helps to identify and prioritize the Lean initiative and it provides the basis for an efficient facility layout.

Steps for mapping the current state:

1. Select a product group - a series of items that have something in common. Develop a matrix to determine which products follow similar process paths, starting with last steps, first. Map the process steps. Define the starting and stopping boundaries.
2. Model the customer demand. Estimate a smoothed daily demand for the product group by analyzing historical and forecasted demand. Identify key requirements from the value stream (examples: packing, shipping requirements). These requirements will be used to set objectives.
3. Map the material flow. Try to fit on a 11" x 17" page and use a pencil. If the system is much larger, use Post-its™ ® on butcher paper. Draw the steps for when and how material moves. There are two options: Push or Pull. Material can be pushed to next step as soon as it is produced. Material can be pulled by customers when they are ready to receive it.
4. Map the information flow. How are customer requests received? (examples: sales process, forecasts, calls, faxes) how production information go to manufacturing ? How are suppliers notified?
5. Walk the process and collect data, such as Inventory (Raw, WIP, FG), Delay, Cycle time, Changeover time, number of shifts, Reliability / uptime, batch size, percent complete and accurate. This information can be "ball park" figures. Draw a data box under the process box containing process specific information. (data examples: cycle time, setup time) . Take physical inventory at each level.

Important ! As you walk the process begin with the last step. The last step is closest to customer, and it sets the required pace for upstream processes. Adjust material or information flow as necessary. Don't be tempted to used standards. Always collect information directly from the source. That means, don't pull information from a computer. Walk, look, and physically count. Look for waste. (Continued on page 4)