



## Practice Periodical – Articles for the Practicing Engineering Manager

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### Welcome to the Practice Periodical

#### 2017 IAC Keynote Speaker Interview With Amy Hawkins, Hexagon

By Teresa Jurgens-Kowal, PhD, PE, PMP, NPDP, PEM, SMC



*Q: Your presentation on user experience was fascinating and touches on the theme of design thinking which is becoming very important for engineered products and services to be successful in globally competitive markets. Engineers might be unfamiliar with how important customer experience is. You discussed a few soft skills in your presentation. What soft skills would you recommend that engineering managers learn in order to be successful with customer user experiences?*

**A: When I am hiring team members, I think about two characteristics – humility and confidence. Humility is important as a listening skill. Your customers and clients really know much more about what they do than you do. It takes humility to listen carefully and ask relevant, probing questions. You really must listen for an answer instead of just trying to formulate a response. And you need to have confidence how you implement the methodology of the user experience process – inquiry and data**

**gathering. With the right approach and process, you will get good answers. Pointsource is a company that states this well: “We have no idea what you need yet. But together, we’ll figure it out.”**

**What I’m told is that empathy is a better word than humility to describe gathering of customer insights. But using your empathy still means you need to be a good listener to get a good answer. It’s very important to communicate well as an engineering manager. Ultimately, we have to understand qualitative information to design products with a desirable set of requirements.**

*Please follow this link to read the interview in its entirety: <http://asem.org/blog/5611066>*

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## **Congratulations to All of the 2017 IAC Award Winners!**

By Heather Nachtmann, Ph.D. and ASEM Past President



It was a pleasure to lead the 2017 ASEM award process. It is humbling and exciting to see the contributions our members are making to the engineering management community. Through my ASEM executive committee service, I get the opportunity to work with members of our leadership team as they dedicate their time to ASEM. What I do not get to see is their careers and their investments in the broad EM community outside of ASEM. Each year I am impressed with our nominees and winners of our Engineering Management of the Year award, and this year’s recipient NASA Marshall Space Flight Center Director Todd May clearly exemplified the great work one can accomplish when one brings engineering management skills to a leadership position. I am always so proud when I review the nomination packets of our ASEM Fellows and get to see the contributions our new Fellows are making and have made to their employers and communities. Also of particular note is the accomplishments of our students. Each year the best student paper and best dissertation competitions become increasingly competitive and it is impressed to see the quality of student our EM programs are producing. We are very proud of all the 2017 ASEM award winners and are pleased to have this opportunity to recognize their efforts.

*View the entire list of winners by following this link: <http://asem.org/blog/5611099>*

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## The Challenge of Designing to Fit

By Donald Kennedy, P.Eng.

A huge problem that is seldom discussed and maybe even often not recognized is the tendency for many engineers to over design. The thinking is that more is better, but sometimes adding too much makes a situation worse. It is difficult to personally take the responsibility for cutting back on a design but in a competitive environment these decisions may save a company.



I am going to relate an example where over design had been taken to an extreme. I had to champion a project to handle steam condensate in a process plant. This was basically distilled water that came off the system and was collected in a tank. There were nine such tanks at the plant. The company was paying \$4 million dollars a year to have the water trucked off site. The filling of the tanks was not uniform nor predicable and a truck and driver were paid to be on hand 24 hours a day 7 days a week to empty any tank that was full. However, the proposed project to automate the pumping of the water back into the process was \$8 Million, making it difficult to raise the capital to eliminate the need for the truck to be on standby.

*Please enjoy the full post by following this*

*link: <http://asem.org/blog/5611160>*

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## Now Recruiting Volunteers for the 5<sup>th</sup> Edition of EMBOK Guide

By Hiral Shah, Ph.D., CEI, PEM, PMP



Efforts are underway to publish the next edition of the book "A Guide to the Engineering Management Body of Knowledge" (EMBOK Guide) in the third quarter of 2019. ASEM is seeking volunteers who are committed to help with this important publication. If you are interested in reviewing the domains or contributing to any of the domain content, please fill in the required information using this link (takes less than 2 minutes to

complete): <https://goo.gl/forms/ocPjva21O4SaKr5g2> **Please respond by December 15.** Volunteers will be selected based on their expertise and on as need basis. For further questions email: [EMBOKEditor@asem.org](mailto:EMBOKEditor@asem.org)

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## Professional Training Program in Engineering Management Launched in the Philippines

By Engr. Jesus "Jess" N. Matias, ME, CPEM, PMP



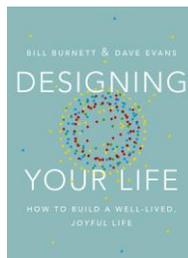
The National Engineering Center, the industry provider of engineering services of the University of the Philippines – College of Engineering will launch a training program in engineering management for practicing engineers this coming April to May 2018.

The program will introduce the engineering management body of knowledge (EMBOK) of the American Society for Engineering Management (ASEM) to local industry practitioners. Philippine companies have long sought for a framework that will equip engineers and other related professionals with competencies needed to manage organizations and highly-technical processes; this new collaboration between the UP-NEC and the ASEM hopes to fulfill that need.

The program will consist of fifty-six training hours of lectures and workshops based on the ASEM EMBOK including a simulated examination for the ASEM CPEM certification. Satisfactory completion of all requirements, as well as a passing grade in the final examination, will earn for the program participant the “Professional Certificate in Engineering Management”, a new credential which is expected to help young practicing engineers become recognized for upper management positions.



*More details are available at this link: <http://asem.org/blog/5611218>*



## Designing Your Life: How to Build a Well-Lived Joyful Life - Book Review

By Teresa Jurgens-Kowal, PhD, PE, PMP, NPDP, PEM, SMC

A recent trend in product development

projects has recognized the value of designers in meeting customer expectations. We heard a great talk by Amy Hawkins on design thinking at the 2017 IAC, for example. Engineering managers, of course, are also aware of the enhanced development capabilities for a project team that includes cross-functional representation. *Design thinking* formalizes the roles of designers in problem-solving and project execution.

Bill Burnett and Dave Evans have recently released a new book called *“Designing Your Life”* that applies the principles of design thinking to career planning. Many of the tools that we use in design thinking for determining product or system requirements are discussed as examples for life planning. The authors share real-life stories from their students and colleagues at Stanford to support the design thinking methodology.

*“Designing Your Life”* includes a lot of useful design thinking tools applied to our careers and lives. Of course, journaling is a strong design thinking tool that allows us to investigate qualitative aspects of a problem as well as the emotional pull that any given alternative reflects. Mind mapping is another design thinking tool the authors utilize in *“Designing Your Life”*. Mind mapping is a quick ideation exercise to explore different linkages among ideas, thoughts, and themes. Storyboarding is another design thinking tool, used to capture a potential single solution from initiation to execution. This technique is often used in film-making but is also used in market research for new product development customer interactions. Thus, we can apply storyboarding to a personal question or to an engineering design challenge.

*The entire report is available on the ASEM website at the following link: <http://asem.org/blog/5611063>*

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From the Communications Director

By Tricia Simo Kush, CSM, CPEM



Thank you to all of the Practice Periodical contributors for making this year-end issue so interesting and informative. A special acknowledgement is extended to both Annmarie Uliano and Teresa Jurgens-Kowal for helping me with the details behind creating this issue. I look forward to bringing you more timely articles in the coming year. If there is anything that you

would like to see - or - if you have something to share, please reach out to me at [Communications@ASEM.org](mailto:Communications@ASEM.org).

*On behalf of everyone at ASEM, have a safe and peaceful holiday season; see you again in 2018!*

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