Overview

This workshop will explore how to turn the language of customers into the language of engineering. Methods like netnography, field observations, customer interviews, and minimum viable product testing result in piles of raw data that product development teams have to sift through. Some statements explicitly relate to a single desired product feature ("I want this in green"). Others are more difficult to translate into clear requirements and – in a second step – technical specifications ("I wish this was easier to use" or "I hate vacuuming"). Engineers and computer scientists, however, require clarity about what the product should like and how it should perform: How heavy? How much power consumption? What response time? ...

A translation step is therefore needed but several things can go wrong. First, the specified product sticks much too close to the current status quo and only provides minor improvements over solutions that the customer is already familiar with – not a good basis for building a business! Second, important requirements are misinterpreted or missed and the development team envisions and works on a product that won't be accepted by the market. And third, the known requirements and product vision are so poorly captured in technical specifications that engineering delivers to spec, but nevertheless a product that nobody wants.

We will look at various approaches from mechanical engineering, software development, and service innovation that help facilitate the translation from needs to requirements to specification.

To prepare for the workshop, please do the following:

- If available: bring the "raw" market/customer research data (or a subset thereof) of your L9 project.
- Watch this video by Clayton Christensen – this is to remind you that we are not shooting for only minor tweaks of existing products https://www.youtube.com/watch?v=yVCZ-7xSsCw
- Watch this video that illustrates a simple approach to writing a requirements document: https://www.youtube.com/watch?v=MCXi4KtRTG0 . This is part of the SCRUM approach for software development. Check out this website for more information: http://www.agilemodeling.com/artifacts/userStory.htm
- Read these two articles:
    - AW Ulwick and LA Bettencourt, "Giving Customers a Fair Hearing," *MIT Sloan Management Review*, 49 (2008), 61–69 <http://www.sce.carleton.ca/faculty/tanev/TTMG_5103/Articles/Ulwick_Giving_customers_a_fair_hearing_MIT_Sloan_2008.pdf> [accessed 11 December 2014].
    - Mary Jo Bitner, Amy L. Ostrom and Felicia N. Morgan, "Service Blueprinting: A Practical Technique for Service Innovation," *California Management Review*, 50 (2008), 66–94 <http://dx.doi.org/10.2307/41166446>.