

In partial fulfillment of the terms for obtaining the PhD degree, Maria Hoffmann Jensen will give a lecture on the following subject:

Value Creation from Big Data Analytics - A systems approach to enabling big data benefits

on Tuesday 29th of November 2022, 13:00, in room 0.2.13 at Selma Lagerlöfs Vej 300

Abstract:

In my dissertation, I investigate how to engineer a method for realizing benefits from big data analytics projects. Big data analytics projects are complex and involve various elements, such as delivering the needed technology to capture, analyze, evaluate, and deploy data. The intangible nature of what big data analytics projects essentially deliver, and how the organization expects to reap value from this adds to their complexity. Principally, big data analytics deliver an information statement in the form of, e.g., predictions or prescriptive analytics, to be consumed and acted upon in the organization, which might lead to value. Yet the latter depends upon several other factors, which I will present in the dissertation. The question of how big data analytics creates benefits has captured the attention of researchers within the field.

While many advances have been made in terms of technologies, few studies provide an in-depth analysis of how benefits are realized, i.e., how we bridge the gap from big data technology to benefit realization. This is a key challenge from big data analytics that I address in the dissertation guided by the main research and I address this from two perspectives: boundaries and dependencies, drawing upon the research fields of benefits management and systems thinking concerning big data analytics benefits.

The dissertation's contribution is a proposal of a method and lessons for creating benefits with big data analytics projects based on a system thinking perspective. I argue that a benefit focus begins at the project level, but benefits instead materialize post-project in their organizational use. Based on findings from five studies, I propose a tailored version of the benefits dependency network as a fit for big data analytics projects. Moreover, I present contributions to how big data analytics benefits become evident in addressing the boundaries and dependencies associated with these. To this, findings portray social roles, specific concerns and key problems in making a benefit evident. Finally, I address 1) the measurement of benefits, which presents lessons on how benefits require change and change requires measurement, 2) establishing measurement depending on the type of 'who' involved in benefits realization and 3) how explicit measurement is dependent upon other contextual measures as the first two lessons presented. The dissertation suggests several further research opportunities, including evaluating big data analytics benefits from a systemic perspective and validating the lessons on measurement in several big data analytics projects.

Members of the assessment committee are Associate Professor Dimitrios Raptis (Chairman), Aalborg University, Professor Patrick Mikalef, Norwegian University of Science and Technology and Associate Professor Jacob Nørbjerg, Copenhagen Business School.

Professor Peter Axel Nielsen and Associate Professor John S. Persson has supervised Maria during her PhD. Company supervisors from Vestas was Kim Emil Andersen and Sven Jesper Knudsen. Moderator Associate Professor Anders R. Bruun.

All interested parties are welcome. After the defense the department will be hosting a small reception in cluster 5.