TRANSFORMING SMES THROUGH OPEN DATA INNOVATION

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COURSE DESCRIPTION

This 6-week GovLab Academy Project Clinic is designed to help the leaders of small and medium sized enterprises (SMEs) use open and shared data to solve business problems, design new product and service offerings, and drive innovation within their business models. Through exposure to mini-lectures, curated readings and videos, case studies, and hands-on in-class exercises, the Clinic will take SME entrepreneurs through every step of the process of finding, accessing, cleaning, structuring, and deploying open data.

PRE-REQUISITES

Participants are expected to have a basic understanding of business concepts and to hold a strategy position with a small or medium-sized enterprise.

Though it is not a requirement, students who come prepared with a business idea will receive the most benefit from taking this course.

LEARNING OBJECTIVES

1. Develop an understanding of what open data is, how it is produced, where it can be accessed, and who is using it currently.

2. Learn from others through understanding how existing businesses are using open data to create new products and services, and to optimize their business operations, through in-depth case studies and analyses.

3. Provide strategies for entrepreneurs to define their business problem, take stock of open data resources available to them, and experiment with open data through trial-and-error.

4. Understand the challenges and best practices of open data use.

5. Develop tools and strategies to measure the success of open data use, and to assess its impact on the business.

OUTLINE

▸ **Pre-Work:** Watching 2-3 videos, perhaps reading 1 or 2 articles, on value of open data

▸ **Class 1:** Introduction: The Benefits and Challenges of Using Open Data (case studies; discussion of their relevance to SME context)

▸ **Pre-Work:** 1-page "Problem Statement" on making the strategic choice about which set(s) of open data to use against which value-creating opportunities to which ends

▸ **Class 2:** Workshop: Framing an Open Data Value Proposition (critique of the problem statements; walk through a structured diagnostic template)

▸ **Pre-Work:** Review of relevant Open Data sources

▸ **Class 3:** Workshop: Creating (and validating) Plans to identify, access, and tap relevant open data sources

▸ **Pre-Work:** Readings on working with data to make it usable as a bass for taking actions and making decisions

▸ **Class 4:** Workshop: Mastering the Practical Challenges of Managing with Data

▸ **Pre-Work:** Readings/cases on risk and performance measurement

▸ **Class 5:** Identifying (and monitoring) the Risks and Measuring the Benefits of Employing Open Data

▸ **Class 6:** Final presentations; group critique and discussion

SUGGESTED READINGS AND RESOURCES

INTRODUCTION TO THE ROLE OF OPEN AND SHARED DATA IN BUSINESS INITIAL CASE STUDIES

READINGS

"_Making official data public could spur lots of innovation_," The Economist, May 18th, 13, Accessed August 24, 2014.

Bonina, C. _New Business Models and the Values of Open Data: Definitions, Challenges, and Opportunities_. NE-MODE 3K – Small Grants Call 2013.

Heusser, F. Understanding Open Government Data and Addressing Its Impact (draft version). World Wide Web Foundation.

Moore, Alida. "_Congressional Transparency Caucasus: How Open Data Creates Jobs_," April 2, 2014. Accessed July 30, 2014. Socrata.

Verhulst, S. and Caplan, R. "Appendix III: Case Studies," taken from _Open Data: A 21st Century Asset for Small and Medium Sized Enterprises._" (forthcoming)

Other resources:

▸ _Data.gov/impact_
▸ _OpenData500.org_
▸ _Open Data Institute_

THE DATA LANDSCAPE: OPEN AND SHARED DATA SOURCES

READINGS

"_Open Data Privacy Discussion Notes_," _OpenDataResearch.org_, Gurin, Joel. _The Current State and Future of Data-Driven Innovation (Draft)._ Report to the Chamber of Commerce Foundation. July 16, 2014. Accessed July 24, 2014.

Shueh, Jason. 2014. 'Open Data: What Is It And Why Should You Care?' _Govtech.Com_.

Accessed October 23 2014. _http://www.govtech.com/data/Got-Data-Make-it-Open-Data-with-These-Tips.html?page=2_.

OTHER RESOURCES

▸ *Data.gov*
▸ *https://nycopendata.socrata.com/*
▸ *Enigma.io*
▸ *Department of Commerce: Data Sets*
▸ *W3C's Open Data Directory*
▸ *Yelp's Academic Dataset*

VALUE PROPOSITIONS, PRODUCTS AND REVENUE MODELS

READINGS

Capgemini Consulting. *The Open Data Economy: Unlocking Economic Value by Opening Government and Public Data*. *Capgemini Consulting*. Accessed July 24, 2014.

Hartmann, P.M., Zaki, M., Feldmann, N., and Neely, A. "Big Data for Big Business? A Taxonomy of Data-driven Business Models used by Start-up firms." University of Cambridge: Cambridge Service Alliance.

MAKING OPEN DATA USABLE, AND MEANINGFUL: KEY RESOURCES AND STRATEGIES FROM THE FIELD

READINGS

"Linked Data- Connect Distributed Data across the Web: Frequently Asked Questions (FAQs)," *LinkedData.org,* Accessed August 24, 2014. *http://linkeddata.org/faq*.

Few, S. "Data visualization for human perception." *The Encyclopedia of Human-Computer Interaction, 2nd Ed.* (2013).

Monoochehri, M. (2014). "Chapter 1: Four Rules for Data Success." *Data Just Right: Introduction to Large-Scale Data & Analytics.* Pearson Education, Inc. p. 1-10.

Provost, F., and Fawcett, T. (2013). *Data Science for Business: What you Need to Know About Data Mining and Data-Analytic Thinking.* (Chapter 1: Data-Analytic Thinking, Chapter 2: Business Problems and Data Science Solutions)

DATA-DRIVEN DECISION-MAKING AND DATA ANALYSIS

READINGS

Provost, F., and Fawcett, T. (2013). *Data Science for Business: What you Need to Know About Data Mining and Data-Analytic Thinking.* (Chapter 1: Data-Analytic Thinking, Chapter 2: Business Problems and Data Science Solutions)

Bertolucci, J., *"Big Data Analytics: Descriptive Vs. Predictive Vs. Prescriptive,"* InformationWeek, December 31, 2014

Steve Sashihara, *The Optimization Edge: Reinventing Decision Making to Maximize All Your Company's Assets,* New York: McGraw Hill, 2011, Kindle Location 252.

Kohavi, R, Rothleder,, N., and Simoudis, E., "Emerging trends in business analytics." *Communications of the ACM* 45, no. 8 (2002): 45-48.

Video: Aetna, "Open Data in Healthcare," *Mashery.com, http://www.mashery.com/resources/videos/aetna-open-data-healthcare*

RISKS AND CHALLENGES: ASSESSING RISKS, BENEFITS, AND CHALLENGES OF USING OR SWITCHING TO OPEN DATA

READINGS

Floridi, L. "Open Data, Data Protection, and Group Privacy." *Philosophy & Technology* 27.1 (2014): 1-3

Ceolin, D. et al., "Two procedures for analyzing the reliability of open government data." In *15th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems*. 2014.

Ahmed, S. "Data Portability: Key to Cloud Portability and Interoperability." *Available at SSRN 1712565* (2010).

DEVELOPING PLANS TO MEASURE IMPACT

READINGS

Ubaldi, B.. "Open Government Data: Towards Empirical Analysis of Open Government Data Initiatives," *OECD Working Papers on Public Governance* 22 (2013). *http://opendataforum.info/files/OECD_Barbara_Ubaldi.pdf*

Gruen, N, Houghton, J., and Tooth, R., "Open for Business: How Open Data Can Help Achieve the G20 Growth Target."