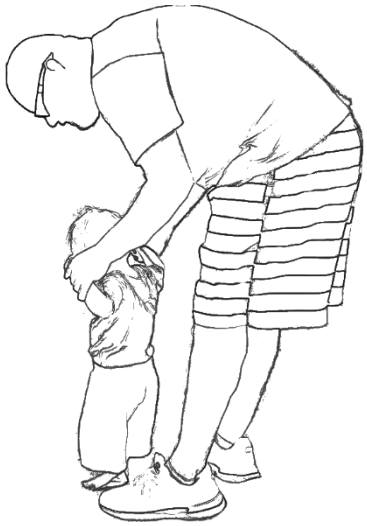

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DS 101 – A cost-aware introduction to digital sustainability

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This document contains an abridged[1] course syllabus for an introductory mini course to digital sustainability. The course emphasises the connection between doing digital things sustainably and saving and/or making money for it.

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Week 1. Digital sustainability

Digital sustainability has two sides.

There is a need to make digital tools more sustainable, which can help reduce operative costs for companies operating largely or mainly online.

There is also a need to use digital tools to improve sustainability actions in the physical world, which can be profitable opportunity for companies able to develop and deliver digital tools that work as intended.

Week 2. The context

Sustainability is no longer entirely optional.

- While not uncontroversial, standards and legislation asking companies to engage in one or another form of sustainability reporting are becoming increasingly common—especially in the EU.

Sustainability can enable access to better financing is possible.

- Banks and investors globally now often ask for environmental, social, and governance (ESG) risk disclosure and information about the UN's Sustainable Development Goals (SDGs) as part of their financing process.

Requirements on companies will vary per region and company size, among other things, but they likely will mean a need for data gathering, analysis, and reporting.

Week 3. Making digital tools sustainable (and saving money for it)

The more resources you use in your digital infrastructure, the higher the emissions and, typically, the higher the bills.

[1] The document is an abridged version of the syllabus available at the following GitHub repository: https://github.com/jbolns/ds_101. The repository takes precedence in the event of conflicts.

Well-designed well-coded digital tools can be both sustainable and significantly cheaper to run than less intelligent approaches – with some actors claiming savings can be as much as 80%.

Equally, several other project decisions like, for instance, type of server/cloud infrastructure, cain significantly increase or decrease, both, the sustainability, and costs of any digital solution.

Week 4. Using digital tools for sustainability (and making money for it)

Digital tools can do a lot for sustainability. As concern about climate change grows, opportunities will be available for those able to deliver digital tools that solve real-world sustainability problems.

However, any such tools need to be sustainable and cost-efficient. This is not idealism. It is a simple market reality.

If they are not sustainable, there is a significant risk of greenwashing scandals and potentially even lawsuits. If they are not cost-effective, it will be very hard to get buy-in.

Optional Project

This course is not graded. However, students will be given the option to form teams to put together a project plan defining the stages of setting up an online company that aims to solve a sustainability problem.

The projects will then be ranked from most to least sensible.

Submissions must include details about the two sides of the digital sustainability challenge:

- How the students plan to maximise the sustainability of their digital infrastructure and the cost-savings this represents vis-à-vis other approaches
- How the resulting tools can help to solve real-world sustainability problems.

Since the project is not graded, students are encouraged to do a good job so that they can benefit from the learning experience and feedback. Else, they're wasting everyone's time, including their own.