

Assessment 1: Background research report

DECO3800/DECO7380 Studio 3 - Proposal 2020

10%, due 16:00 12-16 March (3 days following studio session)

Mission statement:

As a designer, you are required to undertake a brief exploration of a problem space that will allow you to put forward a project idea that addresses a specific problem within one of the identified challenges.

Around the world, leaders in government, technology research, and science communication have been discussing and writing about Grand Challenges that face us as we move into the 21st Century. Many of these challenges are related to existential threats such as climate change, ageing population, critical resources, and international conflict. For us as designers of digital technologies, it is interesting to note the key role that these technologies play in addressing the challenges, but also how some challenges result from changes and risks associated with technology.

At a high level, we have examples of governments producing Grand Challenge reports that identify threats and opportunities for national progress in key areas (e.g. <https://www.gov.uk/government/publications/industrial-strategy-the-grand-challenges/industrial-strategy-the-grand-challenges>), as well as the United Nations' Sustainable Development Goals (<https://www.un.org/sustainabledevelopment/sustainable-development-goals/>). Journalists on leading platforms are writing articles that identify and discuss challenges that we must face in the near future (e.g. <https://www.bbc.com/future/article/20170713-what-will-the-challenges-of-2050-be>). Researchers in academia and industry also have a tradition of looking to the future to identify the problems their disciplines must address in the future (e.g. <https://www.tandfonline.com/doi/full/10.1080/10447318.2019.1619259>, and <https://link.springer.com/article/10.1007/s12599-015-0394-0>). Given the regularity of this latter exercise, it is also interesting to look at older publications that set out to identify today's world when it was still well in the future (<https://www.microsoft.com/en-us/research/project/being-human/>).

All the above citations are of broad relevance to the projects you will undertake in Studio 3 this year. As a starting point, you should have a look at some of them to inform your thoughts and discussions in studio sessions.

Task Description:

Early in the studio process, you will be introduced to a number of potential challenge areas within which projects can be formed. Your task will be to select a possible problem space and conduct research into the current "state of the art" in that area. This may include,

amongst other things, investigating what problems exist requiring solutions with digital technology, what solutions are at the forefront of current technologies, and what design challenges exist within the selected problem space.

Once you have selected your problem space you have 2 goals to work towards.

1: The Arena of Ideas

Each week in studio, while this process takes place, and online via slack or other online channels as provided for course communications, you will discuss with your peers and teaching team what you are discovering and how your enquiries are guiding you to a better understanding of the problem that you wish to propose a solution to. (Note, this forms part of your Active Participation in Studio).

2: Research Report

At the end of the process you will write up your findings in a short design report that outlines the problem that you have identified/resolved, and potential solution(s) based on your research.

The goal of this document is to:

1. Explain the problem space (as you understand it) to the reader.
2. Break down the key aspects of the problem space based on research.
3. Explain your potential idea(s).
4. Convince the reader that your idea addresses all of the major concerns as you outlined them.
5. Provide a simple guide on what the next steps might be to start the ideation process.

It is important to note that the goal of this assignment is for you to conduct some background reading and research on a problem space and briefly document your findings. The identified problem and idea(s) will stand as input to the next phase of studio where you form a team and combine ideas with your team mates. Team formation may involve merging of ideas from the different team members, or it could equally involve selecting one of the many identified problems as the starting point for the project.

Criteria & Marking (report):

Criteria for this report focus on your ability to confidently communicate an idea based on a critical review of relevant literature and online sources of information. Any statements about the problem and proposed solution(s) should be justified with citations to reliable evidence (publications, stakeholder interviews, etc.) that ensures the problem and solution are not simply the result of your thinking in isolation.

High Distinction	Innovative idea <ul style="list-style-type: none">• Innovative proposal to solve a clear and real problem in the chosen domain• Original and creative idea for the use of digital technology well matched to the chosen context• Excellent justification of idea based on cited background research• Technological solution is possible or logical
Distinction	Creative idea <ul style="list-style-type: none">• Creative solution to a clear and real challenge in the chosen domain• Creative idea for the use of digital technology well matched to the chosen context• Very good justification of idea based on cited background research• Technological solution is possible or logical
Credit	Substantial idea <ul style="list-style-type: none">• Substantial solution to real challenge in the chosen domain• Interesting idea for the use of digital technology appropriate for the chosen context• Good justification of idea based on cited background research• Technological solution may be possible
Pass	Satisfactory idea <ul style="list-style-type: none">• Idea does not solve a problem or is outside the chosen domain• Involves limited use of digital technology with some connection to the chosen context• Some justification of idea based on background research• Technological solution may or may not be possible
Fail	Weak idea <ul style="list-style-type: none">• Idea does not address a problem and is outside the chosen domain• Little or no use of digital technology with no connection to the chosen context• Idea is not backed up with any justification• Technological solution may not be possible