IDE Master Graduation
Project team, Procedural checks and personal Project brief

This document contains the agreements made between student and supervisory team about the student's IDE Master Graduation Project. This document can also include the involvement of an external organisation, however, it does not cover any legal employment relationship that the student and the client (might) agree upon. Next to that, this document facilitates the required procedural checks. In this document:

- The student defines the team, what he/she is going to do/deliver and how that will come about.
- SSC E&SA (Shared Service Center, Education & Student Affairs) reports on the student's registration and study progress.
- IDE's Board of Examiners confirms if the student is allowed to start the Graduation Project.

USE ADOBE ACROBAT READER TO OPEN, EDIT AND SAVE THIS DOCUMENT
Download again and reopen in case you tried other software, such as Preview (Mac) or a webbrowser.

STUDENT DATA & MASTER PROGRAMME
Save this form according the format "IDE Master Graduation Project Brief_familyname_firstname_studentnumber_dd-mm-yyyy".
Complete all blue parts of the form and include the approved Project Brief in your Graduation Report as Appendix 1 !

family name	Zhou 5887
initials	Y given name Ying
student number	
street & no.	
zipcode & city	
country	
phone	
email	

Your master programme (only select the options that apply to you):

IDE master(s): ( ) IPD   ( ) Dfl   (★) SPD

2nd non-IDE master: _____

individual programme: ___ - ___ (give date of approval)

honours programme: (Honours Programme Master)

specialisation / annotation: (Medisign)
(Tech. in Sustainable Design)
(Entrepeneurship)

SUPERVISORY TEAM **
Fill in the required data for the supervisory team members. Please check the instructions on the right !

** chair	Dr. ir. Mooij, S.C.	dept. / section:	DOS/MCR
** mentor	Dr. ir. Keller, A.I.	dept. / section:	HCD/DCC
2nd mentor	Lotte Mobach		
	organisation:	Accenture Industry X	
	city:	Eindhoven/Amsterdam	country: the Netherlands

comments (optional)

Chair should request the IDE Board of Examiners for approval of a non-IDE mentor, including a motivation letter and c.v..

Second mentor only applies in case the assignment is hosted by an external organisation.

Ensure a heterogeneous team. In case you wish to include two team members from the same section, please explain why.

APPROVAL PROJECT BRIEF
To be filled in by the chair of the supervisory team.

chair   Dr. ir. Mooij, S.C.   date   31 - 08 - 2022   signature

Sylvia Mooij - IO
Digitally signed by Sylvia Mooij - IO
Date: 2022.08.31 11:08:28 +02'00'

CHECK STUDY PROGRESS
To be filled in by the SSC E&SA (Shared Service Center, Education & Student Affairs), after approval of the project brief by the Chair.
The study progress will be checked for a 2nd time just before the green light meeting.

Master electives no. of EC accumulated in total: 37   EC

Of which, taking the conditional requirements
into account, can be part of the exam programme   30   EC

List of electives obtained before the third
semester without approval of the BoE

○ YES   all 1st year master courses passed

★ NO   missing 1st year master courses are:

ID4070 IDE Academy (4,0)

name   C. van der Bunt   date   05 - 09 - 2022   signature

C. van der Bunt
Digitally signed by C. van der Bunt
Date: 2022.09.05 11:02:51 +02'00'

FORMAL APPROVAL GRADUATION PROJECT
To be filled in by the Board of Examiners of IDE TU Delft. Please check the supervisory team and study the parts of the brief marked **.
Next, please assess, (dis)approve and sign this Project Brief, by using the criteria below.

- Does the project fit within the (MSc)-programme of the student (taking into account, if described, the activities done next to the obligatory MSc specific courses)?
- Is the level of the project challenging enough for a MSc IDE graduating student?
- Is the project expected to be doable within 100 working days/20 weeks ?
- Does the composition of the supervisory team comply with the regulations and fit the assignment ?

Content: ★ APPROVED   ○ NOT APPROVED

Procedure: ○ APPROVED   ★ NOT APPROVED

- the missing course ID4070 should be finished before the green light meeting

comments

name   Monique von Morgen   date   06 - 09 - 2022   signature

Initials & Name   Y   Zhou   5887   Student number   4590708

Title of Project   Data driven design inspiration for food manufactures

Data driven design inspiration for food manufactures

project title

Please state the title of your graduation project (above) and the start date and end date (below). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

start date   29 – 08 – 2022   31 – 01 – 2023   end date

Food production accounts for around one-quarter of global greenhouse gas emissions (see figure 1). For instance, food waste alone is responsible for 6% of global greenhouse gas emissions.

At the same time, society calls for changes in the global food industry. Six in ten global consumers look for food and drinks that help with their immune system, acclaimed chefs and restaurants choose to elevate vegan cuisine to fine dining experiences, and more and more ingredients can be grown in a lab.

Innovations toward products which is sustainable for both the body and the planet is desirable and inevitable for food manufacturers.

One way to achieve this is via data. Data has become one of the most valuable resources nowadays. It tells stories about the past, present and even the future. It demonstrates the effect of your actions, keeps you on track of what is happening and allows you to be strategic in your future approaches. They can be used in a lot of different dimensions (see figure 2). Yet not all food manufacturers' product developers know how to utilize data yet.

The stakeholders involved in this project are the food manufacturers' R&D department and Accenture Industry X.

The food manufacturers' R&D department
Traditional food Manufacturer product developments are mainly driven by the marketing department, they spot the opportunities and then instruct R&D to create something they have done the market analysis for. But in recent years there is a shift toward R&D-focused products where innovations and more sustainable choices are becoming increasingly important. E.g. replacing expensive and non-environmentally friendly ingredients with better substitutes to create the same product. In every situation, efficiency is crucial.
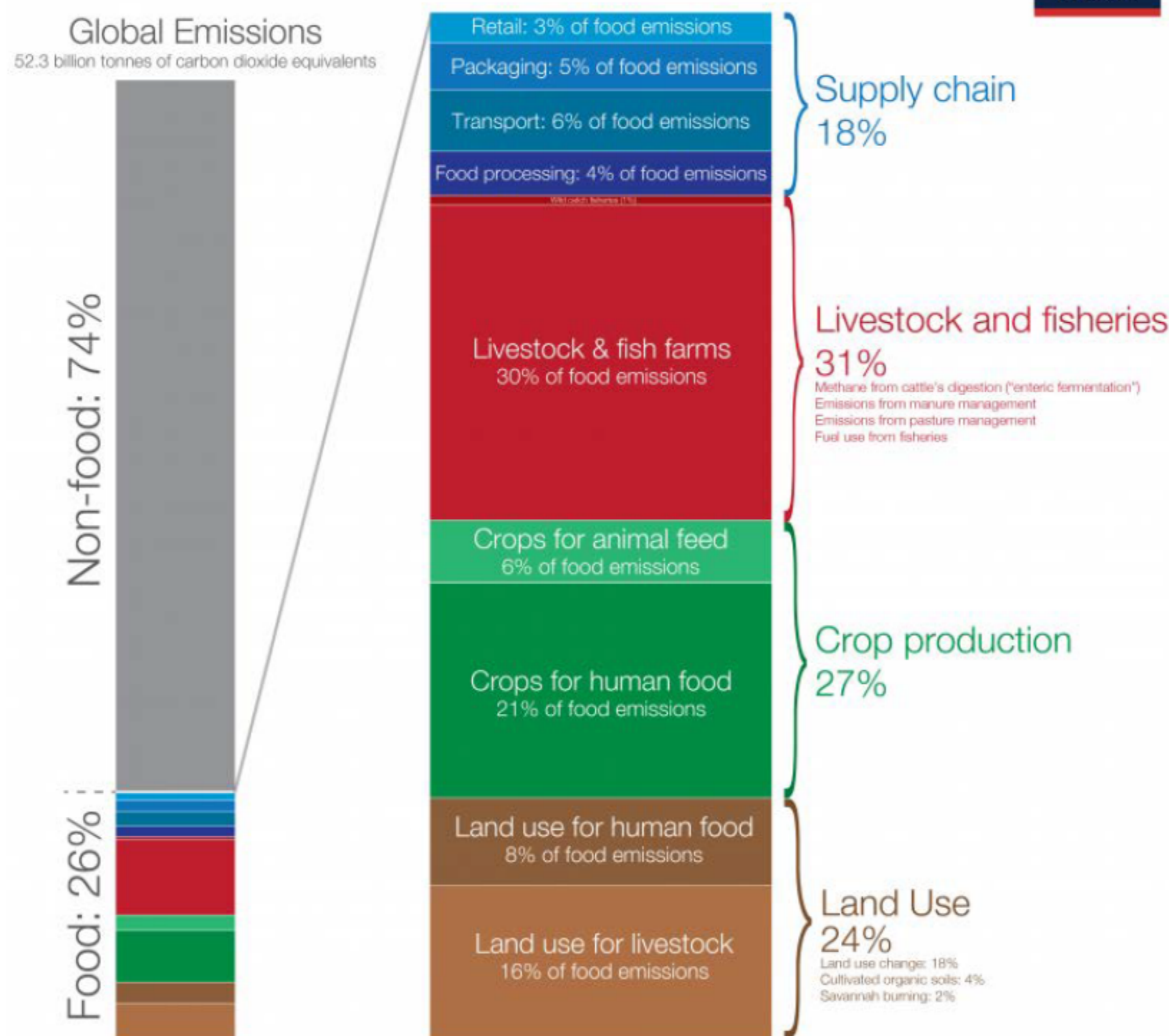
Accenture Industry X
Accenture Industry X aims to help and inspire clients such as food manufacturers' R&D departments to make sustainable innovations to the products which they design and develop by looking at digital opportunities and data-driven insights. Accenture Industry X supports food manufacturers' R&D departments by providing them with the right tools and insights to make decisions easier and faster. Accenture firmly believes in a long-term sustainable strategy across the entire 'value chain' from cradle to grave (product lifecycle) and with the right data-driven insights right at the earliest development stages companies can leverage concepts such as 'sustainable by design' or 'design for recyclability' principles.

space available for images / figures on next page

introduction (continued): space for images

image / figure 1:   Global greenhouse emission from food production
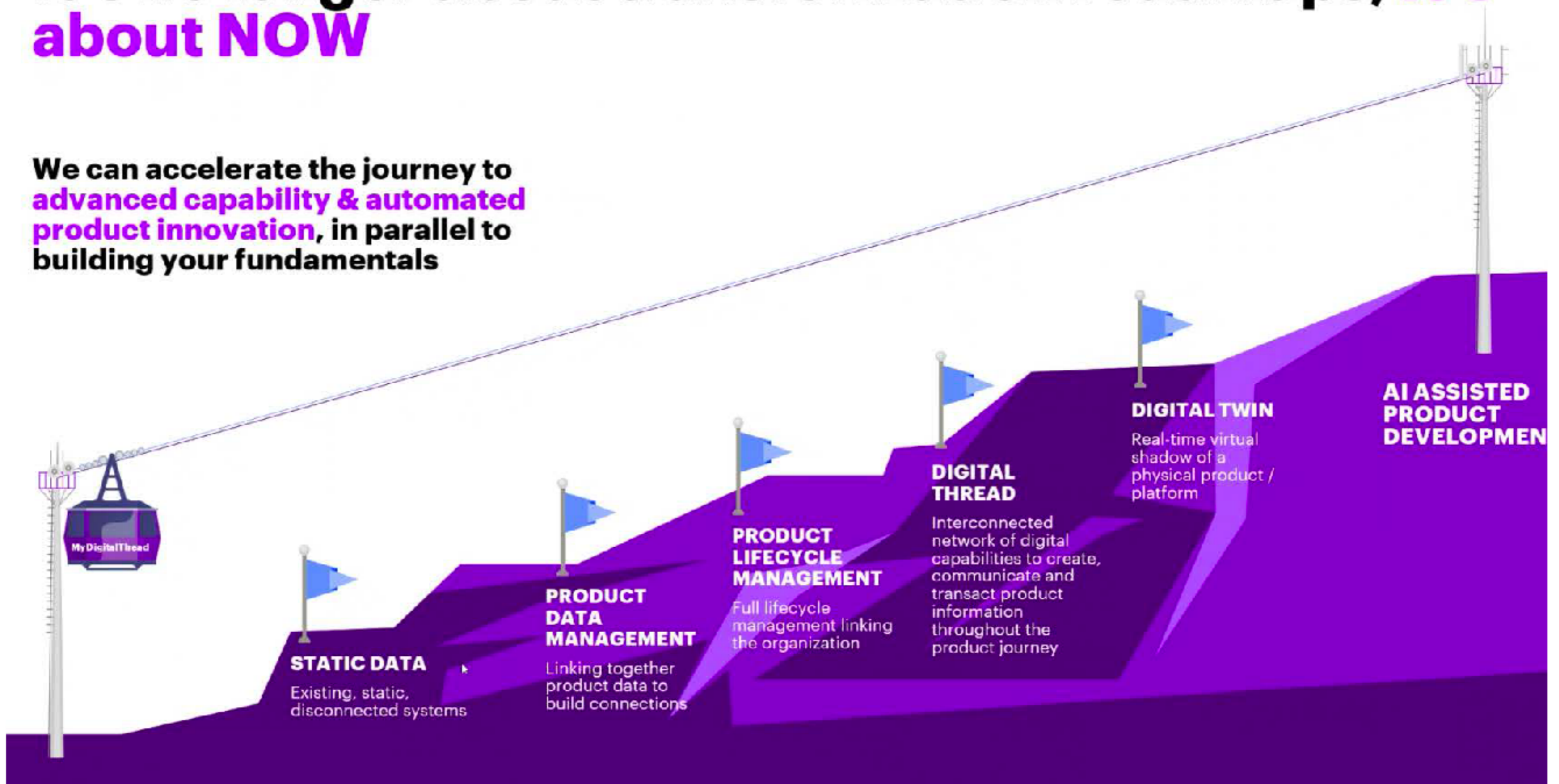
image / figure 2:   Digital innovation roadmap

Initials & Name   Y   Zhou   5887   Student number   4590708

Title of Project   Data driven design inspiration for food manufactures

PROBLEM DEFINITION **
Limit and define the scope and solution space of your project to one that is manageable within one Master Graduation Project of 30 EC (= 20 full time weeks or 100 working days) and clearly indicate what issue(s) should be addressed in this project.

All food manufacturers understand that they must innovate to create more sustainable products. They all have a product LCA. However, when making changes, they still often go for the low-hanging fruits with often only short-term effects. This is because there is a conservative mindset and a wait-and-see attitude when looking at innovation for sustainability.

Therefore, it is important to convince people who do not have a sustainable mindset by showing them what sustainable food design could mean for them.

So, how can Accenture consultants inspire food manufacturers' R&D teams with sustainable product development/design insights from converted from (sustainability) data?

ASSIGNMENT **
State in 2 or 3 sentences what you are going to research, design, create and / or generate, that will solve (part of) the issue(s) pointed out in "problem definition". Then illustrate this assignment by indicating what kind of solution you expect and / or aim to deliver, for instance: a product, a product-service combination, a strategy illustrated through product or product-service combination ideas, ... In case of a Specialisation and/or Annotation, make sure the assignment reflects this/these.

The assignment is to research the current way of working of 1) food manufacturers' R&D teams and 2) how Accenture consultants support them, 3) which types of data are interesting to convey, and 4) data-driven design methods. So that I can design a way to 5) select data, 6) convey insight and 7) translate them into inspiration for the R&D teams.

I expect to deliver a report, a presentation and a (product)service with a prototype and a showcase. This product service is a tool to convert sustainability data into design/development inspirations for R&D teams of food manufacturers. This tool could be a card deck that consultants bring to clients, a canvas to inspire client teams during creative sessions, or an online tool on miro-like programmes to co-develop and design with the client's R&D teams.

There will also be a showcase. The consultant of Accenture Industry X could use the showcase to present my idea to their potential customers. This showcase could be the prototype itself (if applicable), a poster, or a smaller/shorter version of a creative framework that they can try out.

Initials & Name   Y   Zhou   5887   Student number   4590708

Title of Project   Data driven design inspiration for food manufactures

Personal Project Brief - IDE Master Graduation

TUDelft

PLANNING AND APPROACH **

Include a Gantt Chart (replace the example below - more examples can be found in Manual 2) that shows the different phases of your project, deliverables you have in mind, meetings, and how you plan to spend your time. Please note that all activities should fit within the given net time of 30 EC = 20 full time weeks or 100 working days, and your planning should include a kick-off meeting, mid-term meeting, green light meeting and graduation ceremony. Illustrate your Gantt Chart by, for instance, explaining your approach, and please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any, for instance because of holidays or parallel activities.

start date 29 - 8 - 2022   31 - 1 - 2023 end date

date monday	29-aug.	5-sep.	12-sep.	19-sep.	26-sep.	3-okt.	10-okt.	17-okt.	24-okt.	31-okt.	7-nov.	14-nov.	21-nov.	28-nov.	5-dec.	12-dec.	19-dec.	26-dec.	2-jan.	9-jan.	16-jan.	23-jan.	30-jan.
project week#	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Xmas	17	18	Travel	19	20
academic week#	5.10	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.10	2.1	2.2	2.3	2.4	2.5	2.6	Xmas	Xmas	2.7	2.8	2.9	2.10
calender week#	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5

Activities (rows of the Gantt chart):

- *PREPARATION*
- Sketch scenario without research
- *RESEARCH & ANALYZE*
- Research Data driven design methods
- Explore existing data set
- Research WoW R&D food manufactures
- Research Wow Accenture consultants
- Narrow down scope
- Get inspired by other industries
- Analyse findings & check assumptions
- *IDEATION & CONCEPTUALIZATION*
- Prepare brainstorm session
- Hold brainstorm sessions
- Analyze and integrate findings
- Make initial Concepts
- *1ST TEST/VALIDATION*
- Make prototype 1
- Prepare test 1
- Conduct 1st test
- Analyse results test 1
- **MIDTERM**
- *2ND ITERATION*
- Adjust project requirements
- Prepare brainstorm session
- Hold 2nd Brainstorm sessions
- Make 2nd iteration product concept
- *2ND TEST/VALIDATION*
- Make Prototype 2
- Prepare 2nd Test
- Conduct 2nd Test
- Analyse test results
- Make final adjustments
- *FINAL DOCUMENTATIONS*
- Finalize Prototype
- Make showcase
- Finish 80% Report
- Write product manual
- **GREENLIGHT**
- **FINAL REPORT**
- Process feedback
- Finish final report
- Check report references
- **GRADUATION**
- Make Presentation draft
- Make final Presentation
- Practice presentation

Initials & Name Y Zhou 5887   Student number 4590708

Title of Project Data driven design inspiration for food manufactures

1. Everything nowadays is data-driven, but I don't have much experience or understanding of how to best utilize them for design. So, this project is like finding out what are useful data and insights for design and how to use them for food design.

2. At the same time, sustainability needs and will be a standard practice in every industry. The knowledge and skills that I come to acquire for this project, will also be valuable for other projects in the future.

3. I have done two other internships at different organizations. With the experiences I obtained there, I presume I would want to work in an organization like Accenture. This project is an easy opportunity to find out whether it's true.

4. Besides, I have always wondered whether people from other academic backgrounds understand the value and meaning of strategic design. I may be able to experience that during my graduation period.

5. Because both SPD students and lots of people from other academic backgrounds are suitable for jobs like strategic/service designers etc. I am curious about which skills are universal and which competencies make us unique.

6. Furthermore, it would also be very cool to come up with something that might be implemented one day.

7. Finally, I would also want to practice my stakeholder management skills for future projects.