Campus of the future FAIR datasets

Codebook

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Introduction

This codebook enhances the information value of the (1) "University building data from Archdaily" and (2) "Corona-related campus news from Flipboard" datasets. Accordingly, the codebook includes the file content, data structure, and layout in the "campus.of.the.future.project.FAIR.datasets_1_university.building.data_from.Archdaily [.csv]" and "campus.of.the.future.project.FAIR.datasets_1_university.building.data_from.Archdaily [.pdf]" files and Flipboard webpage (the URL link provided in "campus.of.the.future.project.FAIR.datasets_2_corona.related.campus.news_from.Flipboard [.txt]") concerning these datasets. The codebook also describes the methods to process the raw data in these datasets.

This codebook contains variables, values, and descriptions of the files "campus.of.the.future.project.FAIR.datasets_1_university.building.data_from.Archdaily [.csv]", "campus.of.the.future.project.FAIR.datasets_1_university.building.data_from.Archdaily [.pdf]", and "campus.of.the.future.project.FAIR.datasets_2_corona.related.campus.news_from.Flipboard [.txt]".

> variable names: they are printed in bold and correspond to the names in the dataset.
>
> empty: means that information is not provided
>
> string: sequence of characters
>
> date: 4 digits numeric value (year)
>
> integer: whole number (not fraction or negative)
>
> applicable: based on the text and images provided on the Archdaily website
>
> not applicable: based on the text and images provided on the Archdaily website

CODEBOOK 1

In this section the data structure of the "campus.of.the.future.project.FAIR.datasets_1_university.building.data_from.Archdaily [.csv]" and "campus.of.the.future.project.FAIR.datasets_1_university.building.data_from.Archdaily [.pdf]" files are described, including the URL to the original source for each project.

In Figure 1

- Raw data pertains to data directly downloaded from the Archdaily website.
- Processed data pertains to the data manually added from the Archdaily website.
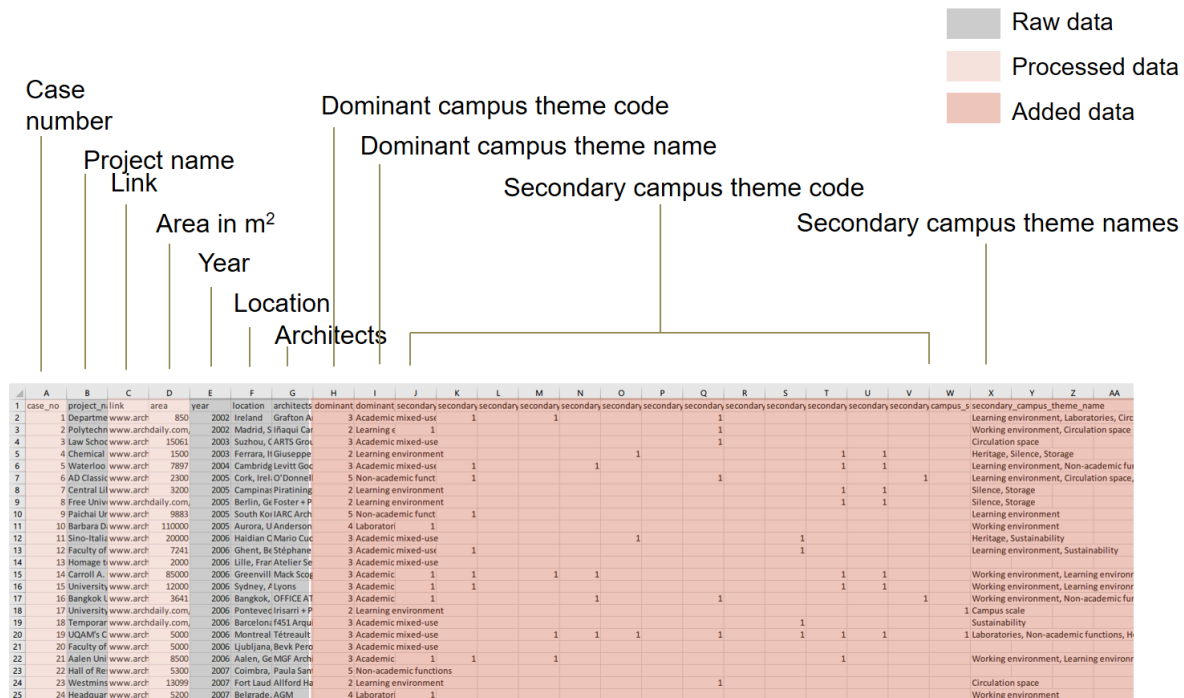- Added data pertains to the variables added by the research group.

Figure 1. The data structure of the
"campus.of.the.future.project.FAIR.datasets_1_university.building.data_from.Archdaily [.csv]" and
"campus.of.the.future.project.FAIR.datasets_1_university.building.data_from.Archdaily [.pdf]" files.

Variable name	Value	Meaning of value
case_no	integer	A case number is assigned to each project to ensure its findability.
project_name	string	Name of the project in the original format of the Archdaily website, which also includes the name of the architect separated by a slash (/).
link	string	Contains the URL link for each project on www.archdaily.com.
area	integer	Area in square meters of the project retrieved from the Archdaily project page. The exact definition of area is to be traced from the data source. Please check the data preprocessing section for the conversion from miles to square meters.
	empty	Information is not provided.
year	date	Year of completion on Archdaily.
location	string	The country or region where the project is physically located according to Archdaily.
	empty	Information is not provided.
architects	string	Architecture firm(s) of the project according to Archdaily.
dominant_campus_ theme		The campus themes demonstrate the most common project characteristics in each project. The dominant campus theme identifies the project characteristics at the project level. While

	there are fourteen campus themes in total, the first five main themes, that have remained a foundation for space configurations, are used to identify the characteristics at the building level.	
	1	This theme focuses on the working environment at university campuses and has high priority as office space occupies one-third of Dutch university campuses. The theme mainly concerns open and closed office spaces, meeting places, and related on-campus businesses.
	2	This theme focuses on advances in educational facilities. The increasingly centralized educational buildings that serve the whole university include lecture halls, classrooms, study places, and exam spaces. To identify the library buildings, Learning environments (theme "2") has been assigned as the primary function, followed by Silence (theme "11") and Storage (theme "12") as the secondary functions.
	3	This theme includes academic mixed-use projects designated to a certain user group at the campus, including faculties, departments, institutions, and the like. Please check the project name to identify the designated user (i.e. if it is a faculty building, department, or institution). Buildings that simultaneously include working environments (theme "1"), hybrid learning environments (theme "2"), and other functions (such as theme "4" or theme "5") have been identified with the theme (theme "3") as the primary function due to their mixed-use character. However, none of these themes are dominant within the mixed-use composition of this category. If they are, the buildings will be marked with themes "1", "2", "4" or "5" instead.
	4	This category encompasses laboratories and related businesses comprising the core research infrastructure on university campuses. Due to their specialized functions, laboratories have high investment and operating costs. In projects that include the working environments (theme "1") and explicitly mention laboratory functions (theme "4") laboratories has been assigned as the dominant theme due to the specific spatial requirements of the laboratory spaces.
	5	The formally predominantly academic character of the university campuses increasingly includes non-academic functions and complexes with urban characters, including facilities for residential functions, retail and leisure, related businesses, and infrastructure.

	U	Unknown dominant theme. There is insufficient information to identify the main function of the building.
	N	Not a university. Sufficient evidence shows that the project is not related to a higher education institution campus such as non-academic business parks and high schools.
dominant_campus_ theme_name	Includes the full name of each theme.	
	Working environments	Theme "1" See "dominant_campus_theme" - "1" for the description of the theme.
	Learning environments	Theme "2" See "dominant_campus_theme" - "2" for the description of the theme.
	Academic mixed-use	Theme "3" See "dominant_campus_theme" - "3" for the description of the theme.
	Laboratories	Theme "4" See "dominant_campus_theme" - "4" for the description of the theme.
	Non-academic functions	Theme "5" See "dominant_campus_theme" - "5" for the description of the theme.
	The fourteen secondary campus themes described below include all sub-functions identified in each project.	
secondary_campus_ theme_1	Where possible the spatial terminology used to define themes has been standardized by using the Art & Architecture Thesaurus. See "dominant_campus_theme" - "1" for the description of the theme. Includes meeting rooms, office (desks), offices (work spaces).	
	1	The campus theme is applicable.
	empty	The campus theme is not applicable.
secondary_campus_ theme_2	See "dominant_campus_theme" - "2" for the description of the theme. Includes academic libraries (buildings), academic libraries (institutions), classroom, community college (buildings), community college (institution), exam space, learning commons, learning hub, meeting place, lecture hall, studies (rooms), study places, teaching labs, university college (buildings), university college (institution).	
	1	The campus theme is applicable.
	empty	The campus theme is not applicable.

secondary_campus_theme_3	See "dominant_campus_theme" - "3" for the description of the theme. Includes academic libraries (buildings), academic libraries (institutions), academies (buildings), academies (institutions), circulation (architecture), circulation spaces, classroom, departments (organizational units), event space, exam space, faculties (branches of knowledge), institutes (buildings), institutes (organizations), laboratories (built works), laboratories (organizations), lecture hall, leisure, meeting rooms, office (desks), retail store (built work), storage spaces, studies (rooms), study places, undergraduate schools (building), undergraduate schools (institutions), workplace, workshops (work spaces).	
	1	The campus theme is applicable.
	empty	The campus theme is not applicable.
secondary_campus_theme_4	See "dominant_campus_theme" - "4" for the description of the theme. Includes clinics (buildings, medical), clinics (institutions, medical), data center, lab, laboratories (built works), laboratories (organizations), machine hall, related business, research centers (buildings), research centers (institutions).	
	1	The campus theme is applicable.
	empty	The campus theme is not applicable.

secondary_campus_theme_5	See "dominant_campus_theme" - "5" for the description of the theme. Includes accommodation, apartment, art galleries (buildings), art galleries (institutions), badminton courts, bars (commercial buildings), breastfeeding area, business center, business incubators, cafeteria, café (restaurant), campus commons, catering, transportation, cinema (theater), climbing wall, collaboration plaza, communal space, competition gymnasium, day care centers (buildings), day care centers (institutions), debating chamber, dining halls, dining rooms, dormitories (buildings), dormitories (rooms), espresso bar, exhibition buildings, exhibition halls, , faculty clubs (built works), fitness centers, food commons, galleries (buildings), galleries (display spaces), galleries (institutions), game center, general stores (built works), gyms (rooms or buildings),hairdressers (shops), hotel (built public accommodation), indoor play areas, indoor swimming pools (buildings), infrastructure, kindergartens (buildings), kindergartens (institutions), a launderette, leisure, locker rooms, lounge, lunch commons, lunch rooms, mosques (buildings), movie theater, multi-purpose halls, multipurpose spaces, museums (buildings), museums (institutions), outdoor amenities, outdoor recreation, performance hall, plant, prayer room, public spaces, radio studio, churches (buildings), recreation areas, refectory, related business, research and development, residential buildings, residential facilities, retail store (built work), safes (storage containers), sleeping spaces, arenas (sports buildings), spa & health suite, sports buildings, sports centers (building complex), sports complexes (building complex), sports halls, sports medicine facilities, squash courts, start-ups, student center, student club, student housing, swimming pools, technological park, theatre, wellness centers.	
	1	The campus theme is applicable.
	empty	The campus theme is not applicable.
secondary_campus_theme_6	This theme involves the adaptive reuse and renovation of a monumental or listed building that has heritage value. Includes historical buildings, historical monuments, refurbishment.	
	1	The campus theme is applicable.
	empty	The campus theme is not applicable.
secondary_campus_theme_7	This theme refers to more evening use and weekend openings of central university facilities. Includes flexible hours, open 24 hours.	
	1	The campus theme is applicable.
	empty	The campus theme is not applicable.

secondary_campus_ theme_8	This theme refers to the "in-between space," such as corridors, atriums, staircases, and outdoor spaces in university buildings and campuses, to promote interaction and informal meetings. Includes accessibility, atriums (interior spaces), circulation spaces, circulation, collaboration corridor, courtyards, exterior circulation, interior circulation, interior street, main street, outdoor space, panorama terrace, park, permeability, roof gardens, sheltered atrium, squares (open spaces), terraces (landscaped-site elements).	
	1	The campus theme is applicable.
	empty	The campus theme is not applicable.
secondary_campus_ theme_9	This theme focuses on the utilization of "smart tools" to ensure more efficient and effective use of space. Includes, SMART Boards, Smart Energy saving Light (SEL) system, smart LED lighting.	
	1	The campus theme is applicable.
	empty	The campus theme is not applicable.
secondary_campus_ theme_10	The theme highlights the high standards for the generation and use of sustainable environments on university campuses. These high standards are oftentimes evidenced by explicitly mentioning energy efficiency, circularity, LEED, or BREEAM standards. Includes ecological, energy efficient buildings, green architecture (environmental concept), LEED, BREEAM, lower energy consumption, reduced operating costs, sustainable architecture, vertical gardens, vertical green.	
	1	The campus theme is applicable.
	empty	The campus theme is not applicable.
secondary_campus_ theme_11	The theme addresses the efforts to facilitate silence on university campuses. Includes academic libraries (institutions), academic libraries (buildings), contemplation, noise, noise control, noise- and disturbance-free spaces, quiet study, quiet atmosphere, quiet study, noisy group work, quiet group work, quiet individual study, silent individual study, quiet zone, reflection.	
	1	The campus theme is applicable.
	empty	The campus theme is not applicable.
secondary_campus_ theme_12	This theme represents the storage space on university campuses that in total occupies a substantial amount of physical space. Includes academic libraries (buildings), academic libraries (institutions), data centers, historic collections, lockers, museums (buildings), museums (institutions), pantry, storage space.	
	1	The campus theme is applicable.
	empty	The campus theme is not applicable.

secondary_campus_theme_13	This theme addresses the spaces that demonstrate the past, present and future of academic education, research, and innovation while emphasizing the heritage and pride of higher education institutions. Includes art galleries (buildings), art galleries (institutions), benchmark, emblematic, flagship building, hall of fame, innovation buildings, landmark, living lab, museums (buildings), museums (institutions), pavilion, plant, recognize achievements, sign, technology wall.	
	1	The campus theme is applicable.
	empty	The campus theme is not applicable.
secondary_campus_scale	This theme indicates that the project highlights the campus scale rather than the building scale. It is a group of buildings that forms an intervention on the urban scale. Includes campus, master plan.	
	1	The campus theme is applicable.
	empty	The campus theme is not applicable.
secondary_campus_theme_name	Includes a list of full names of the secondary themes.	
	Working environment	See "dominant_campus_theme" - "1" for the description of the theme.
	Learning environments	See "dominant_campus_theme" - "2" for the description of the theme.
	Academic mixed-use	See "dominant_campus_theme" - "3" for the description of the theme.
	Laboratories	See "dominant_campus_theme" - "4" for the description of the theme.
	Non-academic functions	See "dominant_campus_theme" - "5" for the description of the theme.
	Heritage	See "secondary_campus_theme_6" - for the description of the theme.
	Opening hours	See "secondary_campus_theme_7" - for the description of the theme.
	Circulation space	See "secondary_campus_theme_8" - for the description of the theme.
	Smart tools	See "secondary_campus_theme_9" - for the description of the theme.
	Sustainability	See "secondary_campus_theme_10" - for the description of the theme.
	Silence	See "secondary_campus_theme_11" - for the description of the theme.
	Storage	See "secondary_campus_theme_12" - for the description of the theme.
	Showroom	See "secondary_campus_theme_13" - for the description of the theme.

	Campus scale	See "secondary_campus_scale" - for the description of the theme.
	Empty	No secondary campus theme was identified.

DATA PROCESSING

The methods for data processing for this project consisted of translating and organizing the raw data collected.

string: sequence of characters

integer: whole number (not fraction or negative)

Source variable	Source value	Final variable	Final value	Remarks
Area_sqm	Integer1	Area	Integer3	Converted area in square feet into square meters by dividing it by 10,764.
Area_sqft	Integer2			

CODEBOOK 2

In this section, the data structure of the Flipboard webpage (the URL link provided in "campus.of.the.future.project.FAIR.datasets_2_corona.related.campus.news_from.Flipboard [.txt]") concerning the "Corona-related campus news" dataset is explained based on the variables and list of resources used during the data collection process to increase the findability and readability of the dataset.

Variable name	Value	Meaning of value
Phase	Corona-related campus management topics in the news relevant for the public.	
	Phase1	'100% CLICKS' - What happens on the physical and virtual campus during the lockdown?
	Phase2	'BACK TO CAMPUS' - How will the transition back to the physical campus look like in the short term?
	Phase3	'CAMPUS OF THE FUTURE' - What are the long-term structural effects of the corona crisis? And what does the campus of the future look like? What is the optimal mix?
Perspective	Campus management perspectives relevant to the news.	
	Policymakers	The organizational perspective brings many strategic choices for the continuity of the university to the table.
	Controllers	The financial perspective adds feasibility aspects to the table.
	Users	The functional perspective brings the individual needs to the table.
	Technical managers	The physical perspective brings a range of environmental issues to the table.

LIST OF RESOURCES USED IN FLIPBOARD

ad.nl

alexdanco.com

ams-institute.org

bbc.co.uk

bijavans.nl

birch.nl

bnr.nl

businessinsider.com

calmatters.org

campusday.nl

cnn.com

computable.nl

dailymail.co.uk

dailymail.co.uk

decorrespondent.nl

domusweb.it

dpgmedia.nl

dutchnews.nl

dutchreview.com

dvhn.nl

ed.nl

elpais.com

entrepreneur.com

erasmusmagazine.nl

eur.nl

euronews.com

europa.eu

facto.nl

fd.nl

forbes.com

ft.com

greenbiz.com

hartvoorstudenten.nl

humo.be

independent.co.uk

independent.ie

insidehighered.com

inverse.com

irishexaminer.com

khrono.no

latimes.com

leidschdagblad.nl

lifelines.nl

linkedin.com

maastrichtuniversity.nl

mailchi.mp

mapiq.com

mareonline.nl

media-exp1.licdn.com

nature.com

newcastleherald.com

nieuwsblad.be

nieuwscheckers.nl - ad

nos.nl

nporadio1.nl

nrc.nl

nwo.nl

omroepwest.nl

ourworldindata.org

parool.nl

profielen.hr.nl

pwc.nl

qz.com

radboudrecharge.nl

rijksoverheid.nl

roa.nl

rtlnieuws.nl

rtvnoord.nl

rtvoost.nl

rug.nl

sciencebusiness.net

scienceguide.nl

sleutelstad.nl

standard.co.uk

surf.nl

tandfonline.com

theatlantic.com

theguardian.com

thehour.com

thestar.com

thetab.com

timeshighereducation.com

trouw.nl

tudelft.nl

tweedekamer.nl

twitter.com

ukrant.nl

unity.nu

universiteitleiden.nl

universitytimes.ie

universityworldnews.com

universonline.nl

usnews.com

utoday.nl

utwente.nl

uu.nl

uva.nl

versnellingsplan.nl

vice.com

volkskrant.nl

voxweb.nl

vsnu.nl

vu.nl

workplaceinsight.net

www.lc.nl

yahoo.com

youtube.com