

A model for collaborative project-based learning

Ann Padley

Teaching Fellow in Design Thinking
Centre for Innovation and Entrepreneurship

 [annpadley](#)

[#InnovationUoB](#)

 University of
BRISTOL
Centre for Innovation
& Entrepreneurship

The Innovation Degree Programmes

MArts

Anthropology
Film and Television
History
Music
Theatre

MEng

Computer Science
Electrical and Electronic Engineering

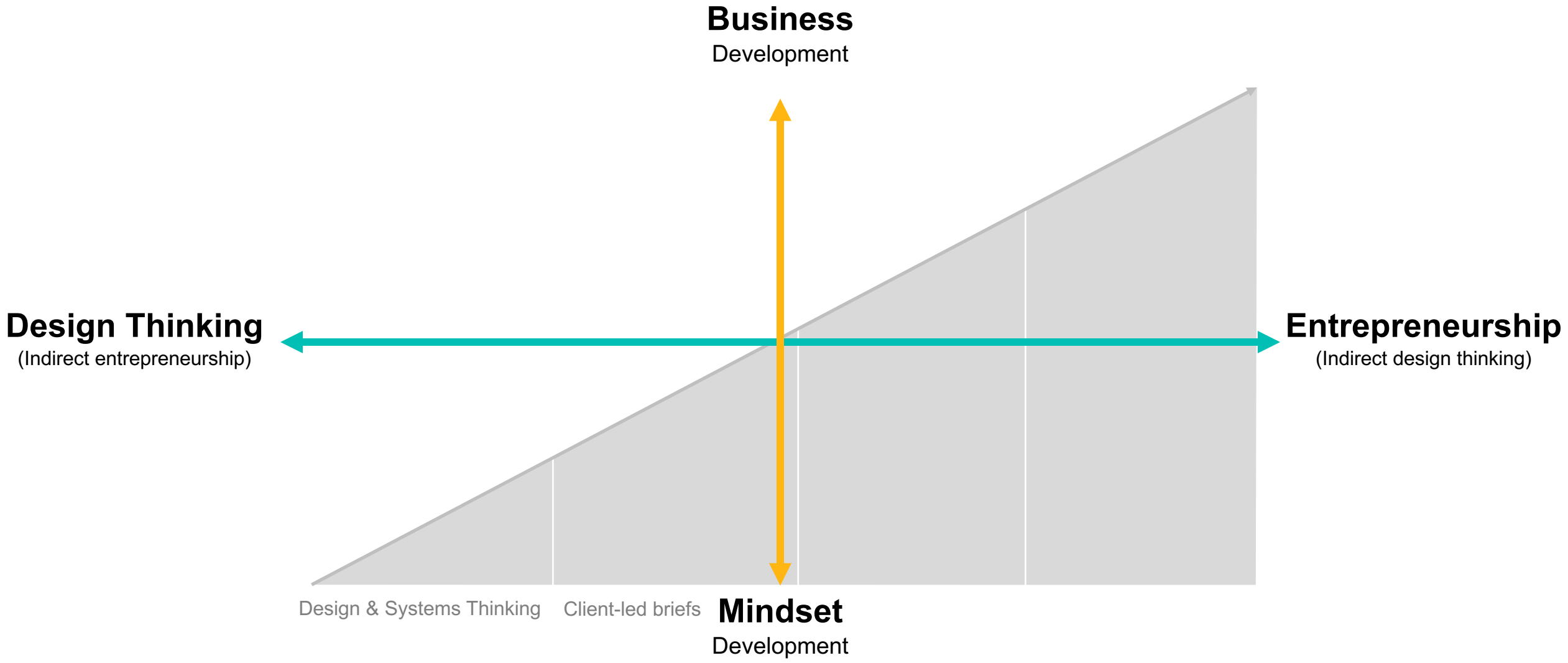
MSci

Geography
Management
Physics
Psychology

with Innovation

MSc Innovation & Entrepreneurship

Innovation Programme 4-year progression



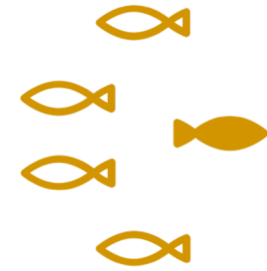
Weeks	5 to 8	9 to 12	13 to 15	16 to 24				
Project	Project 1: Recycling	Project 2: Campus Community Tours	Project 3 (prop): Design management	Project 3: Public transport				
Challenge	Your challenge is to increase recycling in your hall/flat.	Your challenge is to develop a concept for a tour that will bring more community members on campus.	Design management is intended to build on students' existing skills and experience with the design process. It also builds on the centre principle of resourcefulness in the design process due to the nature of independent research and planning. Objective: Demonstrate independent exploration of tools and methods; select and outline elements of a project plan					
Exploration	Theme Empathy & human-centered design Objective Recognise the value of involving people in the design process and the importance of focusing on human needs Topics Develop interview questions Interview users Empathy map (as notes for interview) [GDS Guest Lecture] Build insights as a team (clustering/mind-map) Activity Practice interviews (short) Output 3 empathy maps/student Supplementary		Theme Introduction to ethnography, ethics & user research Objective Build a deeper understanding and gain experience with techniques for involving users; understand the role of the customer journey and service ecosystem Topics Interviewing (recorded) Observing (photo/video) Persona definition Simple ecosystem/ stakeholder mapping Design drivers Journey map storyboard (current state) Problem structuring Building insights as a team (clustering/mind-map) [Need to decide] Insights vs. Deep insights (Henry Ford quote) Activity Team journey map ? Output Problem statement & design drivers Supplementary Creative Theory- Synetics link (Tavis)		Theme Design Management Objective Demonstrate independent exploration of tools and methods; select and outline elements of a project plan Topics Intro Jobs to be done? (- AP) (MadMen example: https://youtu.be/urRDUFpafus) Create a classroom methods wall? Activity Output Supplementary		Theme Value proposition and viewpoints Objective Demonstrate understanding of value proposition in design; consider the viewpoints of multiple stakeholders; understand and address multiple factors within the system Topics Desktop research Field guide development User value proposition Deep insights Introduction to alternate research methods: Surveys, day in the life of, cultural probes, etc ... Activity Output Value proposition, problem statement, persona(s), journey map Supplementary	
Ideation	Theme Team brainstorming Objective Effectively build on the ideas of others, create safe space for new ideas within the team, withhold judgement Topics Key elements for successful brainstorming Team brainstorming around a problem statement (part 1) Brainstorming (part 2) Idea clustering Idea feedback (outside of class) Activity Yes, and ... Output Initial brainstorm Concept capture sheets - Initial concepts to prototype Supplementary		Theme Idea generation theory Objective Explore alternate techniques for idea generation, rank ideas based on ability to meet user needs Topics Hybrid brainstorming (6-3-5 or some other method?) Feasibility/viability matrix for evaluation Idea selection w/ capture sheets to build on the visual communication foundation Activity Output Capture sheets of multiple concepts Supplementary		Theme Idea synthesis and refinement Objective Apply understanding of human needs to develop potential solutions; display ability to combine concepts to form new Topics Idea synthesis Idea evaluation and decision making Activity Output Capture sheets of multiple concepts (including a storyboard if appropriate) Supplementary			
Prototyping & testing	Theme Introduction to Prototype Fidelity and Experience Prototyping Introduction to low fidelity prototypes that focus on user experience Objective Ability to summarise the different types of prototype fidelity and demonstrate how to communicate and iterate user experiences created through quick and Topics Experience Prototyping (Video - Tom) Paper / Card prototype Use scenario (experience prototyping) Iteration (see learning progression based on process) Activity Output Short instagram video of use scenario(s) - use # (no editing software, After effects etc.) Supplementary		Theme Experience Prototyping Low fidelity prototypes that have been developed alongside user journey maps and storyboards, and tested with real users Objective Apply knowledge of experience prototyping and testing to iterate user experience Topics Low fidelity vs. high fidelity and differing results (UX, pre-advertising services/products) Cardboard/video prototypes 3 ideas, 3 prototypes Journey map of service, desktop walkthrough, physical prototype, service scenario, role playing, UI paper prototyping) Test prototypes with classmate (groups exchange) Iteration (see learning progression) Activity Output 3 different ideas shown through 3 different prototyping methods Supplementary TED talk on speaking/powerful presentations		Theme Prototyping and testing for value Creating a problem-solution fit based on previous value proposition canvases in addition to further prototyping Objective Demonstrate value propositions and a range of prototyping and user testing techniques Topics Iterations, fidelity improvements - Value proposition Canvas and problem-solution fit (Part 2 - value proposition) - Introduction to more technology-based prototyping - 1:1 support with specific prototyping needs relevant to case project UX Wireframes How to use Sketch or keynote for UX mockups. Basic CAD (parts, assembly and surfacing) Output to Print. CAM How to go Digital. Vector based 2D (Ai) Potential ST integration: Ecosystem impact, evaluating impact Activity Output Single concept with tested features and an outline of next steps Supplementary			
Output & repeat	Theme Idea pitch Objective Gain experience pitching an idea, involve group in presentation Topics Intro team Show video Some sort of feedback or reflection (class reflection on each other) Activity Team pitch presentations Output Team pitch presentations Supplementary "Your body language shapes who you are Amy Cuddy" link		Theme Idea pitch Objective Refer to idea pitch assessment criteria Topics Activity Team pitch presentations Christmas fun? Output Team pitch presentations Supplementary		Theme Idea pitch Objective Develop presentation style Develop presentation style Theatre, steering, - powerful communication of ideas (theatre, prototype display, audience interaction, video, storytelling etc...) - Guiding audience toward best ideas - next steps - how to bring the project to life (dealing with bureaucracy, gaining support/following, marketing) Activity Output Team pitch presentations Supplementary Plans for project 3			



PROJECT WORK



TEAMWORK



AUTONOMY

PROJECT WORK

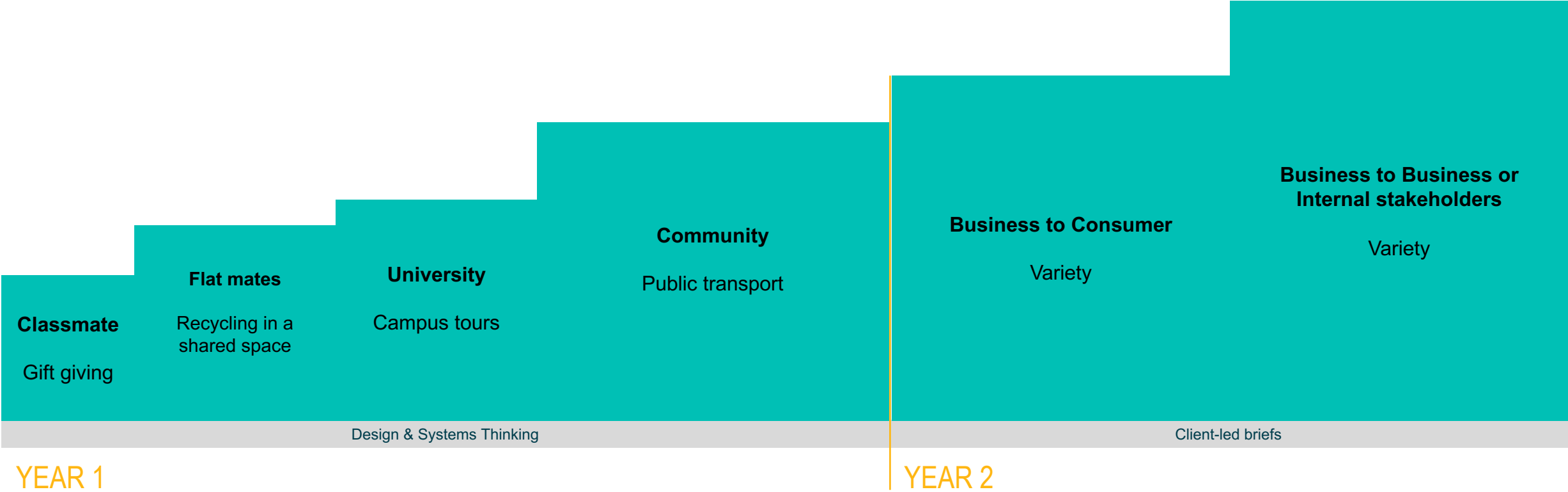
IF

we are to empower people with the skills and knowledge to make significant positive change in the world...

THEN

learning should be set in the context of 'real-world' projects

Project work



“This term’s unit had a very clear goal in mind: to have us working directly with various clients. Raw, unmediated relationships, just like in the real world. In many ways this is the stepping stone in the land of innovation that we are entering.”

Computer Science with Innovation student

TEAMWORK

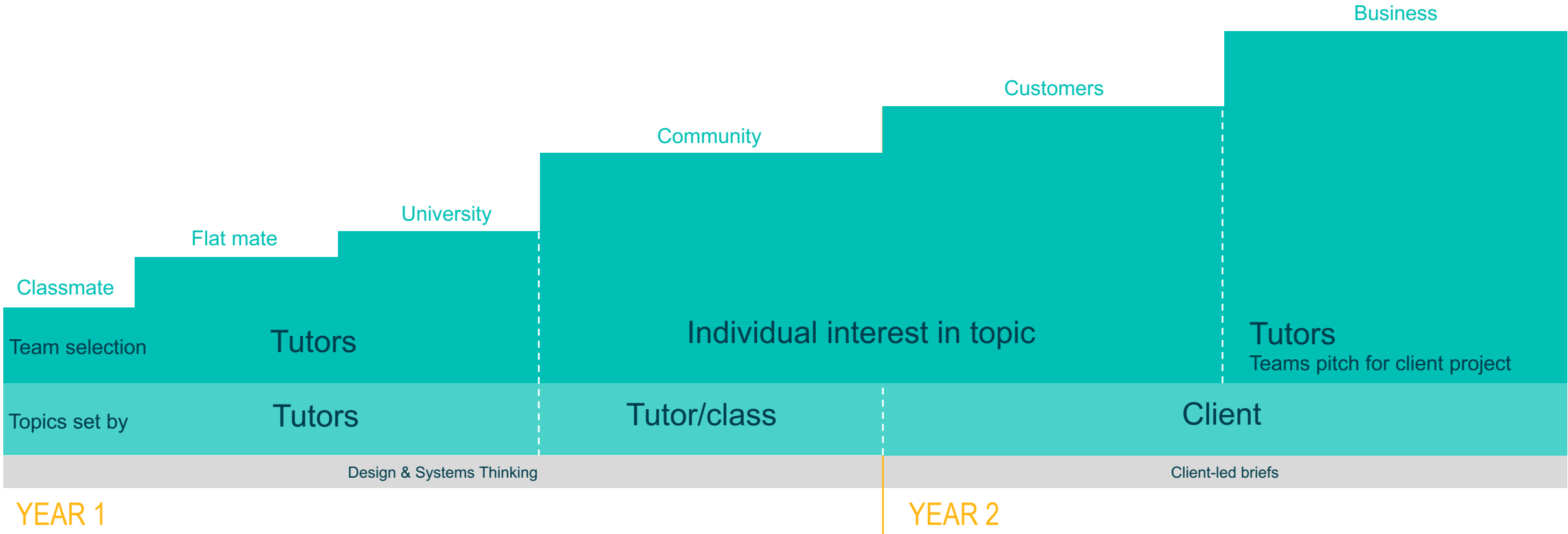
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the next generation of innovators will need to work across traditional boundaries to tackle the world's toughest challenges...

THEN

students should experience working in a variety of team formations and across disciplines

Teamwork



“I enjoy the chance to get to know new people through the challenge of the brief. I find that working with people you don’t get along with teaches you much more about yourself and your role within a group.”

Anthropology with Innovation student

AUTONOMY

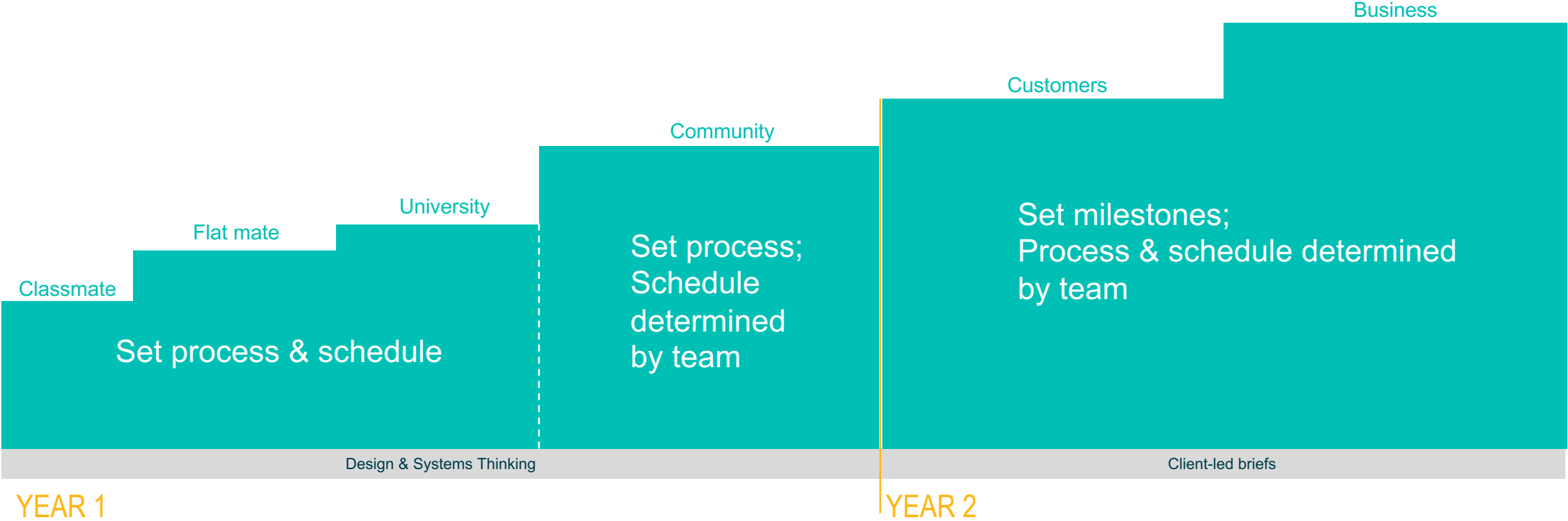
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making an impact in an ever-changing world requires adaptability, agility, and innovative thinking...

THEN

students need to think for themselves and be allowed to both flourish and fail in a safe place

Autonomy



“Although this year spent less time working on theoretical understanding, the substantial amount of hands-on practical experience has produced a far more robust, engaging, and goal-oriented learning environment.”

Theatre with Innovation student