

Lucerne University of
Applied Sciences and Arts

**HOCHSCHULE
LUZERN**

Art and Design
FH Zentralschweiz



The Lucerne Design Management Process

Outline of the principal process used in the
bachelor programme Design Management,
International.

www.hslu.ch/designmanagement

September 2015

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The generic design process

Designers across the various disciplines – including product, industrial, graphic, and web design – all share a similar process when it comes to creating solutions to a particular problem. They generally first set out to produce a problem definition, which subsequently initiates the iterative process of developing viable concepts and options. In short, design in its most basic form is all about creating solutions for a given problem.

This process can be described with a diamond-shaped scheme, whereby the side that opens out represents the conceptual aspects of ideas being generated and the side that tapers in represents the applied aspects of results being synthesized into a desirable and viable solution. Although initially it can be considered a linear process, design becomes iterative during the development phase when options are explored and integrated into results derived from prototyping and experimentation, initiating a further round of insights into processes and refinements of outcomes. Seen from a broader perspective, many of the phases in developing a design take place concurrently, often with parallel or overlapping sub-processes.

The design brief, which defines a particular problem, marks the first stage of the creation process in that it specifies the requirements for conceptual work towards the desired outcome. It also enables designers to define their criteria on the basis of what they learned, helping them to choose a particular concept proposal and allowing for further detailing towards what will ultimately be the finished result.

In the applied professional context, the design process relies on clear, tangible decision-making criteria – unlike in the case of creative processes, which are often driven by intangible and non-verifiable decision criteria, such as gut feelings or personal preferences.

Briefing (or commissioning) a design process

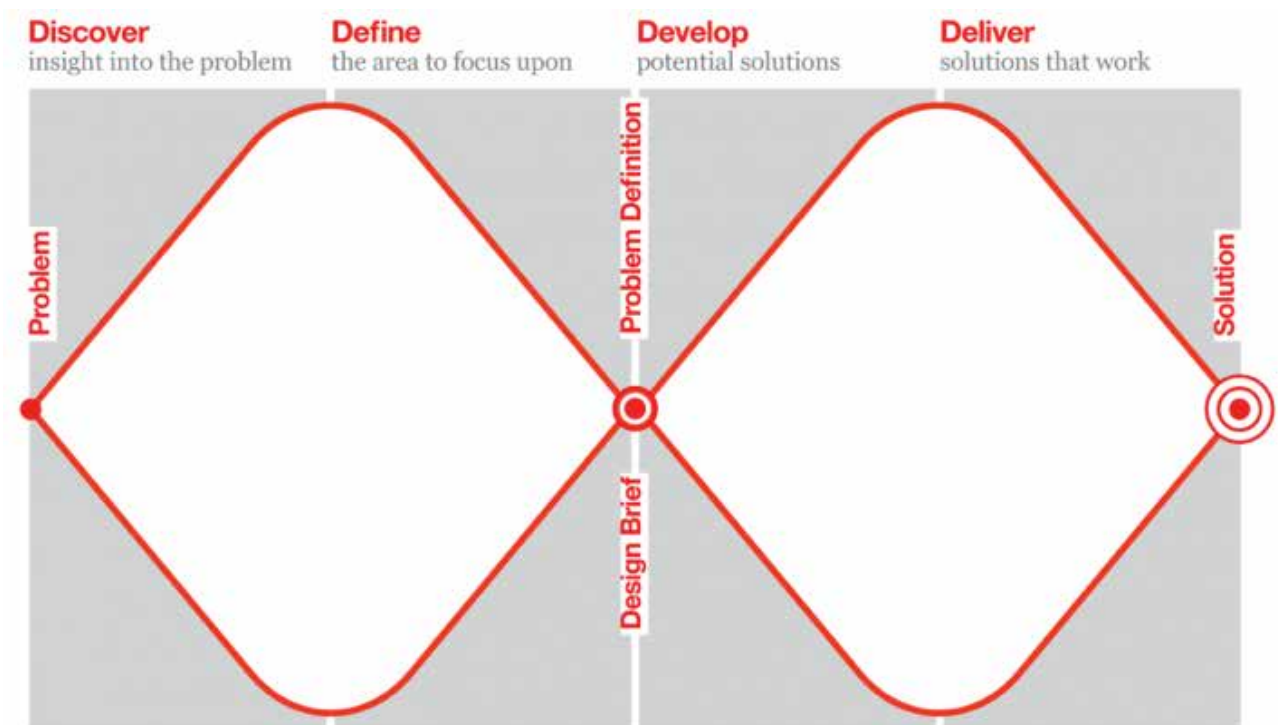
The design brief is crucial for the quality of what any design process delivers because it defines the expectations that are placed on the outcome. To this end it describes the initial problem in detail and in accordance with requirements, and it provides the information necessary for developing the solutions and validating the criteria. While a strong focus on task description is likely to reduce the chance of conflicts along the process, it can limit the quality of conceptual work. Excessively narrow focus on problem definition may restrict the scope of the process and result in incoherent ideas, thus impeding rather than facilitating the work towards a viable solution.

Professional designers have mastered the design development process and are able to focus on developing concepts and articulating feasible solutions as options to be presented to the decision makers. Depending on their role and experience, they can also make the decisions themselves, therefore claiming full functional ownership during design development (referred to as 'creative direction'). On the other hand, they often lack – at the competency or process/authority level – the ability to claim ownership of the process that delivers the design brief. A commissioner or process owner, such as an engineer or a product, marketing, or business manager, generally produces design briefs. Only designers who are also the producer or proprietor will fully own their design briefs. In this respect, designers working for or within an organisation are genuinely concerned about the quality of a design brief, which plays a key role in determining the quality and outcome of their work. The influence of non-designers on the decision process has been described as 'silent design' (Gorb & Dumas, 1992), which refers to aspects that influence the design process from outside of scope of 'active' design.

An improved design process

Poorly defined design briefs and the ‘silent design’ phenomena have led to numerous enriched processes that aim to describe the activities of a particular project. In accordance with Herbert Simon’s decision making theory (1947), these activities generally have three dominant phases: gathering intelligence, developing design options, and choosing a viable option (choice).

The Double Diamond serves as a simple visual map for the overall design process on account of its four distinct phases of discover, define, develop and deliver. It constitutes a comprehensive model in that it includes all the ‘silent design’ activities and covers all the steps needed in order to arrive at a robust and high quality design solution.



The Double Diamond Design Process, © Design Council 2014

Whereas the core design process is mostly about design and choice (intelligence gathering also takes place within the iterative process of concept development), the term ‘intelligence’ as mentioned here refers to the process of consolidating the necessary information and knowledge in order to start the design activities.

The British Design Council created the Double Diamond Process, which depicts the three phases of Simon by adding a second diamond to the core design process – the phase that provides the intelligence necessary for creating a design brief and defining the problem.

1. Problem (statement) – the start of the process and a description of the problem or challenge.
2. Discover – the first quarter of the Double Diamond refers to intelligence gathering, i.e. the research phase that produces the necessary insights and facts for studying the manifestations and root causes of the problem. It is also the phase for gathering the information and insights that serve as basis for the next step.
3. Define – the second quarter represents the definition stage during which the intelligence is processed and applied with the aim of meeting the requirements of the overall concept. It comprises a convergent activity during which research findings

are clustered, making it possible to describe and define the problem or challenge.

4. Design brief – the interface of the two diamonds and culmination of the Define phase. It also lays the groundwork for the design challenge in that it defines the problem.

5. Develop – the third quarter marks the divergent thinking and development phase during which solutions and concepts are created, prototyped, tested and iterated. Furthermore, it produces options for the solution, thereby helping to further refine what has been learned, based on previously defined criteria.

6. Delivery – the final quarter of the double diamond model begins with the selection of a viable concept, which is further detailed in all of the subsequent steps. As a convergent process, it leads to the decision on the final outcome of the design process.

7. Solution – a design outcome that initiates activities for manufacturing and producing.

The role of design management in the design process

To enable the design function to fully benefit from the available expertise, an efficient double diamond approach needs to be in place so that any silent design factors are aligned with the active design and accord with the overarching design process.

Because design activities are often poorly briefed, the task of overseeing the design process naturally falls within the remit of the design manager. Based on the widely accepted definition of the design management task, design managers initiate and subsequently manage the design process (as project manager) and actively participate in gathering intelligence and defining the problem, steps that culminate in the design brief.

The design process as taught at Lucerne School of Art and Design

The Design Management Programme at Lucerne School of Art and Design, a department of Lucerne University of Applied Sciences and Arts (HSLU), aims to develop a thorough understanding of the overarching design process for the benefit of future designers. It also recognises the design manager's leading role as intelligence gatherer and strongly emphasises the importance of design aspects relating to research, ethnography and strategy. Design managers need to be able to influence the attitudes necessary for making good design decisions, as put forward by Herbert Simon in his model for gathering intelligence, designing prototypes, and making decisions¹. This approach is likely to facilitate design thinking and enhance the effectiveness of the design process within organisations, which often merge these elements to a single step, the one of decision making (Boland, 2002).

Design management thus becomes a means of infusing design thinking into the wider context of the organisation and expanding beyond the scope of the development function. When combined with human-centred design values and intuitive design practices (Buchanan, 2007), design management becomes a highly effective instrument for initiating organisational change.

The Lucerne Design Process

Based on the British Councils' Double Diamond Process, in combination with the framework for decision-making as put forward by Simon, the Design Management programme at Lucerne School of Art and Design has created the Lucerne Design Process, which serves as basis for scoping,

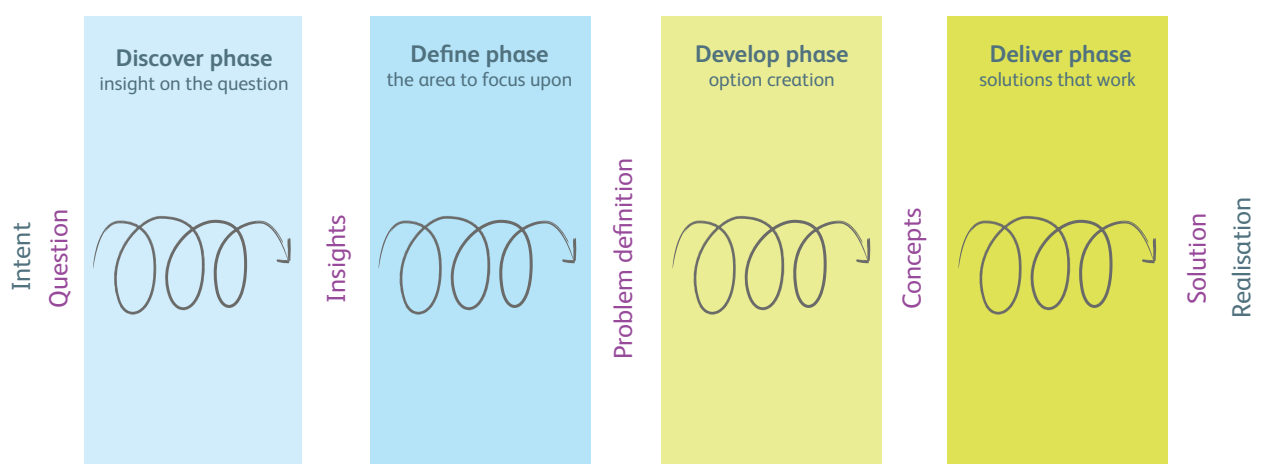
¹ In Herbert A. Simon's *The Sciences of the Artificial* (1969), the author describes the behavioural and cognitive processes of humans making rational choices, that is, decisions.

planning and conducting all design activities within the applied projects that are part of the curriculum. This model aims to develop students' applied competencies throughout the programme, in accordance with the activities of intelligence gathering, design and choice of the Lucerne Design Process. Furthermore, the final thesis, which showcases students' competencies in design management, is designed based on this process.

Definition of terms used in the Lucerne Design Process:

1. Intent – the reasons for starting a design process (a challenge, opportunity, etc).
2. Question – the step of formulating and scoping the interests and options relating to the problem.
3. Discover phase – an iterative and primarily divergent activity of gathering information and insights through primary and secondary research that leads to findings (e.g. a literature review, field test, ethnographic study, etc.).
4. Insights – findings derived from the discover phase.
5. Define phase – a primarily convergent process of synthesising the information and defining the requirements for the development phase.
6. Problem definition – a description of the factors to be addressed during development in order to come up with a solution. This can be a requirement for what the envisioned outcome must deliver and for framing the conceptual work.
7. Develop phase – an iterative and primarily divergent activity that elaborates concepts through validation, testing and research.
8. Concept – the proposals put forward on the basis of the problem as defined.
9. Deliver phase – an iterative and primarily convergent process that details the results from the previous phases into a viable solution to address the problem and related requirements as defined initially.
10. Solution – the outcome of a design process and a deliberate choice in response to a defined problem.
11. Realisation – the implementation of a design

Lucerne design process
Adapted from the British Design Council, 2014



The Lucerne Design Process

solution into a business context.

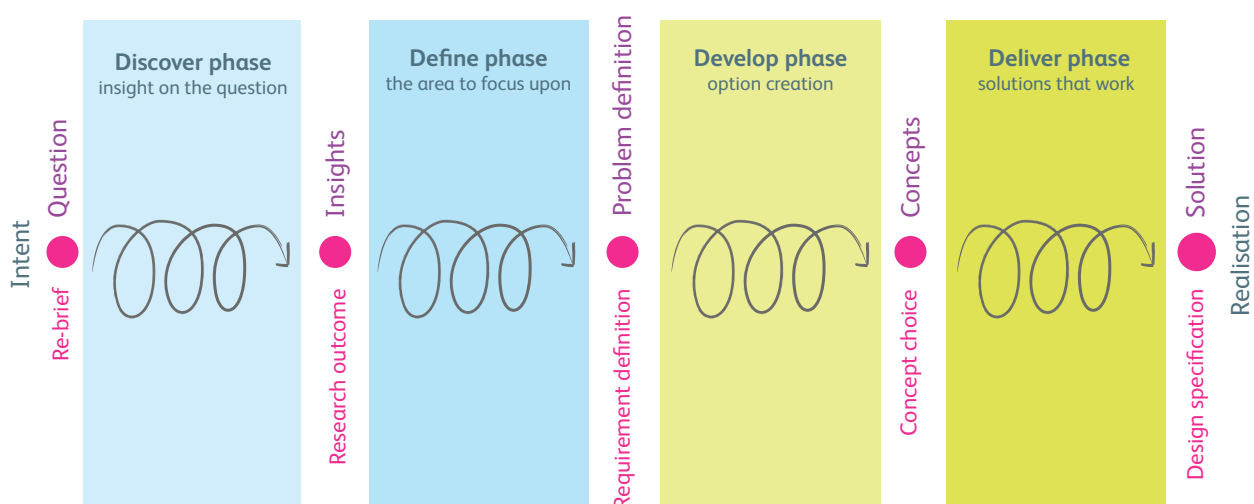
Managing the Lucerne Design Process

Putting any process into practice invariably requires a thorough understanding of the needs of the stakeholders involved. With respect to managing the design process, this mostly means ensuring that resources are available, that their use is well planned, and that decisions effectively serve the objectives. The boundary conditions for any design process thus define the amount of time and resources available, the milestones, and the criteria to be used along the way. Within a business context, this also means understanding the business-relevant boundary conditions that apply to the design processes, which may require additional elements to be included in the design

process:

1. Re-brief – description of the initial question and the approach taken to arrive at a solution, including methodologies, time and resources. This is captured in a project brief
2. Research outcome – a description of the insights and facts in form of a review.
3. Requirement definition: – A requirement or specification of the requirements to which a solution process needs to adhere to. This leads to the design brief – a briefing of what the envisioned outcome of the design activity should fulfil, in order to answer the initial question, including scope, resources, duration and deliverables.
4. Concept choice – the selection of a concept (direction) that will be pursued on the deliver phase
5. Design specification – the definition of the properties of the chosen concept as an input for the realisation.

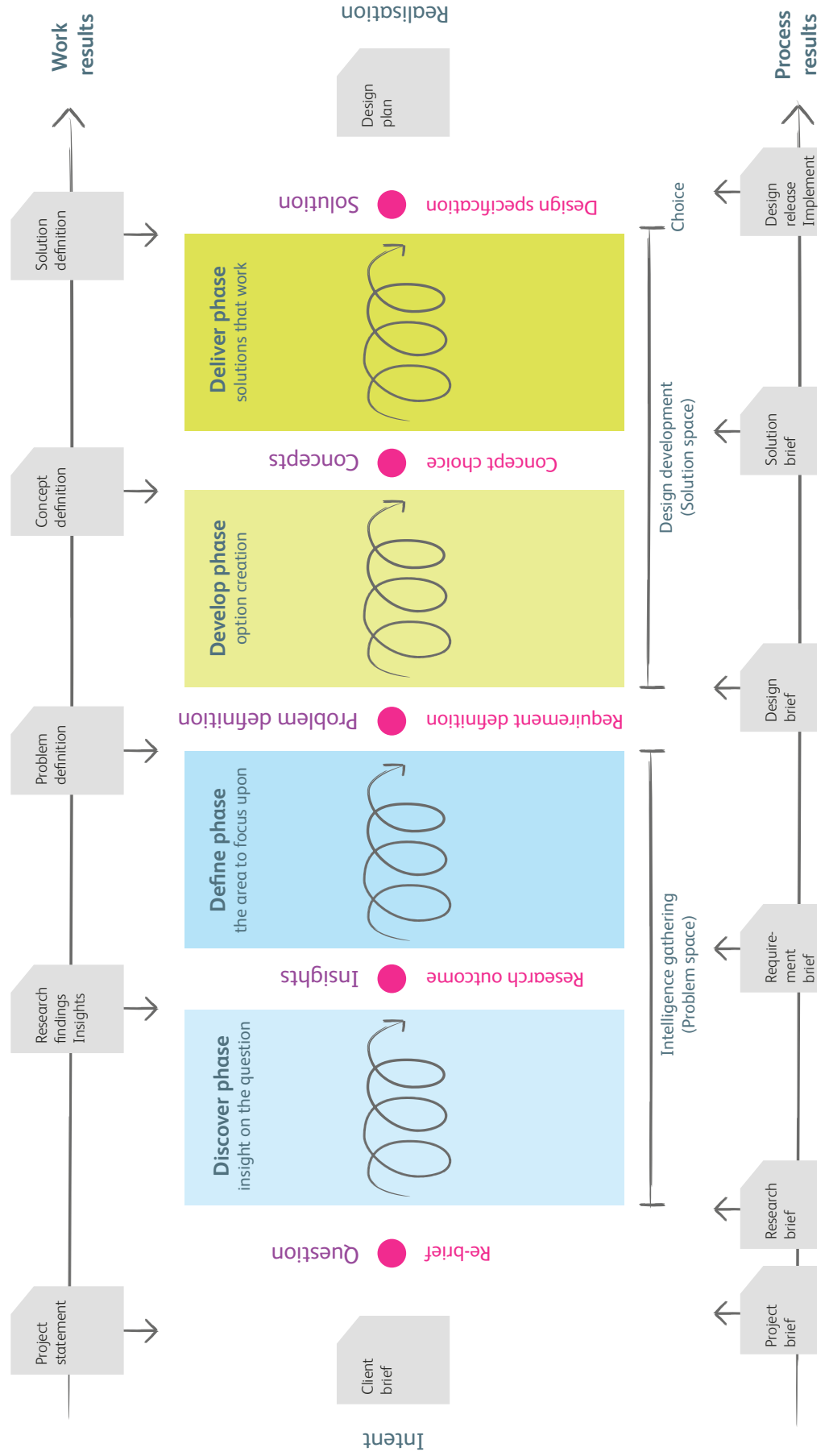
Lucerne design management process
Adapted from the British Design Council, 2014



The Lucerne Design Management Process

Lucerne Design Management Process

Lucerne design management process
Adapted from the British Design Council, 2014



Glossary of terms

1. Design process – an accurate, reliable, and reusable model for the involved parties to collectively work towards a set goal.
2. Intent – the reason for launching a design process (a challenge, opportunity, etc.).
3. Client brief – a description of a commissioner's intent in form of a requirement.
4. Project statement – the underlying problem or challenge that is driving the intent to initiate a design process.
5. Question – formulation and framing of the field of interest in relation to the problem.
6. Re-brief – a milestone that clarifies the conditions under which a project will be conducted.
7. Project brief (assignment) – description of activities, deliverables and decision modalities throughout the project, including resources, time and material needed.
8. Research brief – description of the research question and the approach taken to arrive at a research finding, including methods, time and resources.
9. Discover phase – an iterative and primarily divergent activity of gathering information and insights through primary and secondary research that leads to findings (e.g. a literature review, field test, ethnography, etc.).
10. Research findings – a description of the insights and facts in the form of a review.
11. Insights – formulation of findings from the discovery phase.
12. Research outcome – a milestone clarifying which insights are followed up for the define phase.
13. Requirement Brief – description of the problem field and insights that drive the problem definition.
14. Define phase – a primarily convergent process for synthesising the information gathered and defining the requirements for the development phase.
15. Problem definition – a description of the factors that a development activity must address in order to come up with a solution. This can be a requirement for what the envisioned outcome must deliver and for framing the conceptual work.
16. Requirement specification – a requirement or specification of what the envisioned outcome of the project solution must deliver in order to answer the initial question.
17. Design brief – a framework for the general design challenge as a description of the requirements for the solution process, including the scope, resources, schedule and deliverables.
18. Develop phase – a set of iterative and primarily divergent activities that elaborate concepts through validation, testing and research.
19. Concept – a proposal for a solution based on problem definition that needs to be validated.
20. Concept choice – the selection of a concept that will be pursued during the deliver phase, based on selection criteria.
21. Selection criteria – the properties that can be assessed for the purpose of choice, selection, validation, etc.
22. Solution brief – the description of the activities synthesising the chosen concept into a final solution by setting milestones and interdependencies.
23. Deliver phase – an iterative and primarily convergent process for detailing concepts into a viable solution that meets the initial problem definition and requirements.
24. Solution definition – an iterative and primarily convergent process for detailing concepts into a viable solution that meets the initial problem definition and requirements .
25. Solution – the outcome of a design process, which is a deliberate and validated choice in response to a defined problem.
26. Design specification – the definition of the properties of the chosen concept as an input.
27. Design release – the milestone releasing the design specification.
28. Design plan – the result or outcome of a design process.
29. Realisation – the implementation of a design solution into a business or other context.

About Design Management, International

The Design Management, International (DMI) Bachelor's programme of Lucerne School of Art and Design is the only one of its kind in Switzerland. It enables students to benefit from the proximity to the other design programmes in the department and from the broad range of programmes offered at the other campuses of Lucerne University of Applied Sciences and Arts.

The DMI BA programme

The programme is particularly dedicated to

- facilitating innovative design of management practices and enables students to apply proven methods when working on projects and applying concepts.
- combining theory and practice from the fields of design, business, branding, and communication in order to develop a broad understanding of design, technology, management, and markets.
- teaching the skills that students will need in order to effectively manage the interfaces among these disciplines.
- developing an international orientation – it is taught entirely in English and open to students from around the world. A multicultural student body is an integral part of an open and challenging learning environment.

For more information on the bachelor programme in design management:
www.hslu.ch/designmanagement

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Bachelor Design Management, International

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