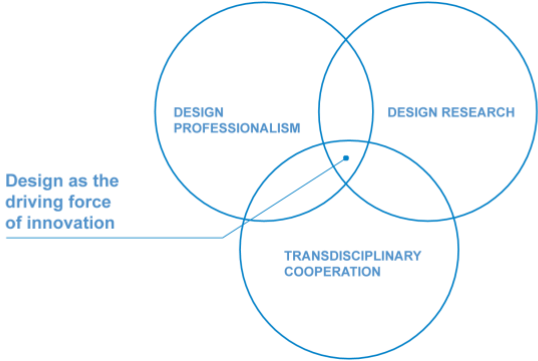
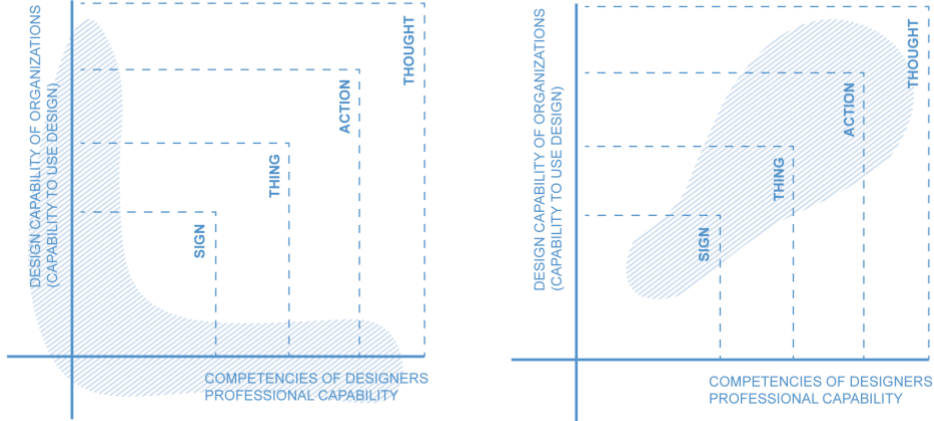


<p>Vision.</p>	<p>With skilful implementation of professional design, by 2023 Estonia will improve their wealth and social welfare, enhance competitiveness, and make the public sector better and more efficient (also, e-state is user-friendly). Design is a natural part of Estonian economy and culture.</p> <p>Estonian design is:</p> <p>globally competitive, research-based and professional, based on transdisciplinary¹ cooperation, thus enabling innovation, i.e. creation of intelligent future products, services and systems; human-centred, able to manage complicated issues of contemporary world (complexities), and also successfully implementing the potential of developing technology, in order to achieve economic success as well as increasing social welfare, while concentrating on environmental sustainability; internationally well known and recognized, with export capability.</p> <p>Estonian companies are characterized by capability to implement design efficiently in the entire value chain. Estonian companies and public sector are using design strategically for solving social problems, developing their products and services, and introducing innovative products and services to global markets. Changes are planned so that these would be user-centred and involve people.</p> 
<p>Social development and related role of design.</p>	<p>We are participants in the major transition of the 21st century, which brings us from the society concentrated on production and consumption to knowledge-based, globalized, wired, and socially and ecologically sustainable social system. The problems needing solution (e.g. aging, urbanization, migration, climate) have become very extensive and complex, and new economic models are arising (e.g. circular economy). These issues, which are called also „wicked problems“, do not fall completely into the competency of any developed discipline, but are transdisciplinary and related to many different areas. In their management, designers are valuable cooperation partners, because they can visualize and analyze major and increasingly more complicated situations, involve different parties and supervise cooperation, in order to reach creative solutions (cooperative design).</p> <p>Fast development of technology provides new opportunities for Estonia on formerly unknown levels. The technological leap currently in progress makes us work and live in new ways. An extremely important aspect for successful implementation of new technological solutions is their usability and meaning for the people (users). Today, a role of design is to build a bridge between people and technology, to create cultural meanings, and to put new technological achievements into context.</p> <p>Beside complex problems and technological development, it has been noted in past researches and strategic documents² that an issue characteristic to Estonia is insufficient capacity of local companies to increase wealth of Estonia, to manufacture efficiently products with high added value, and to offer innovative products and services. Here, use of design is inevitable. Although we already have several good examples, the development of design-intensive products and services is hindered by low capacity of companies to organize development activities, but also low use of solutions of supporting sectors (including ICT and design), insufficient knowledge for using design successfully in the management of companies, and operating culture prevailing in organizations, which does not support involvement of users. In order to ensure development of (innovative) products and services and related increase of global competitive strength, organizations should be capable to use design and implement user-centred approach. Contemporary design also provides organizations with better preparedness for adapting to changes.</p>
<p>Possibilities created by design.</p>	<p>Design can drive the development of Estonian social welfare and economy, helping the companies and public sector of Estonia to:</p> <ol style="list-style-type: none"> 1. Improve their ability to view future trends in rapidly changing world. 2. Develop their capability to resolve complex problems by saving environmental resources, implementing new technological options, and empowering users and communities. 3. Participate in the creation of human-friendly and accessible environment. 4. Perform transdisciplinary cooperation for resolving problems as well as developing innovations. 5. Develop their capability to manufacture efficiently products with high added value and to develop innovative products and services. 6. Create cultural values and form a part of national identity and lifestyle, based on local originality.

<p>Orders of design.</p>	<p>Design can be described through its objectives or results of design process. Two major objectives are highlighted: solving a problem and creating a meaning. Solving a problem generally requires technological capacity, while creating a meaning is related to the cultural field of design.³</p> <p>This development plan is based on the descriptive model of the results of design process „4 Orders of Design“⁴, which is divided as follows: 1. SIGNS (symbols), 2. THINGS (items, products), 3. ACTIONS (mutual communication), 4. THOUGHT (system).</p>																									
	<p>This model indicates the role design can play, if it functions on several levels and in various ways. 4 Orders of Design describes the development path of design as a discipline from traditional concept of visual or physical artefact to mutual communication (interactions) and experiences, and further to reorganization of systems.</p> <p>In order to utilize the potential provided by design, it is important to analyze and develop further the professional skills of designers as well as capability of organizations (companies, public sector) to implement design. For this purpose, the design capabilities matrix has been established in the development plan, which is divided into 16 areas (see Figure 1). To achieve good results, each area requires specific design knowledge and skills, along with experiences for implementing these skills and knowledge.</p> <p style="text-align: center;"><i>Figure 1. Buchanan’s 4 orders of design.</i></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th style="text-align: center;">1st Order Problems of Communication SIGNS</th> <th style="text-align: center;">2nd Order Problems of Construction THINGS</th> <th style="text-align: center;">3rd Order Problems of Action ACTIONS</th> <th style="text-align: center;">4th Order Problems of Integration THOUGHTS</th> </tr> </thead> <tbody> <tr> <th style="text-align: center;">SIGNS</th> <td style="text-align: center;">Words Symbols Images</td> <td></td> <td></td> <td></td> </tr> <tr> <th style="text-align: center;">THINGS</th> <td></td> <td style="text-align: center;">Physical objects (products)</td> <td></td> <td></td> </tr> <tr> <th style="text-align: center;">ACTIONS</th> <td></td> <td></td> <td style="text-align: center;">Activities Services Processes</td> <td></td> </tr> <tr> <th style="text-align: center;">THOUGHTS</th> <td></td> <td></td> <td></td> <td style="text-align: center;">Enviroments Organizations Systems</td> </tr> </tbody> </table>		1st Order Problems of Communication SIGNS	2nd Order Problems of Construction THINGS	3rd Order Problems of Action ACTIONS	4th Order Problems of Integration THOUGHTS	SIGNS	Words Symbols Images				THINGS		Physical objects (products)			ACTIONS			Activities Services Processes		THOUGHTS				Enviroments Organizations Systems
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<p>Capability of Estonian organizations to implement design and competencies of designers.</p>	<p>When analyzing the current Estonian design scene, it can be said that most of the practice has been performed and the best results have been achieved in signs (symbols). Here, experiences of designers are visible, along with capability of organizations to implement available design skills (see Figure 2). In each following order, the number of successful examples is lower, indicating lower level of design skill as well as capability of their use in organizations.</p> <p>Comparing the orders with the ability of design to meet the needs of contemporary society, we can see that if we want to resolve complicated (complex) problems, to visualize future trends, to create critical innovations and broader cultural values, we must first develop the capabilities of the orders „Actions“ and „Thoughts“ in Estonia. These are significantly more research-based, cross the borders of disciplines, and require higher professional level.</p> <p style="text-align: center;"><i>Figure 2. Design implementation capability in Estonia. Current situation and need for development.</i></p> <div style="display: flex; justify-content: space-around;">  </div>																									

Strategic trends and targets	1. Promoting design capabilities , in order to achieve globally increasing competitiveness of Estonian design.	2. Implementing design capabilities , in order to resolve complicated (complex) problems and to keep pace with technological development, to develop innovative products and services, increasing social welfare and supporting economic growth.	3. Design is a part of the culture.
Five major groups of stakeholders are distinguished in the development plan	Education and research		
	Design community		
	Users of design (public, third and private sectors)		
	Policy-makers		
	The public		
Keywords related to the context	4 <i>Orders of Design</i> ; organizations, culture, dynamic capabilities; management of changes; design-controlled innovation; professionalism; cooperation; strategic design; design competencies; complexities; technological development; development of products, services and environments; design research; cultural shifts; design marketing; <i>wicked problem</i> ; core competencies, transdisciplinary cooperation.		
References, definitions	¹ – Transdisciplinary. ² – Use of design in Estonian companies and foundations 2018, Estonian business growth strategy 2014–2020. ³ – E. Manzini, K. Krippendorff, R. Verganti et al. ⁴ – Richard Buchanan.		
Used abbreviations	EAS – Enterprise Estonia EDK – Estonian Design Centre EDL – Estonian Association of Designers EFBA – Estonian Fashion Brands Association EAA – Estonian Academy of Arts ETDM – Estonian Museum of Applied Art and Design HTM – Ministry of Education and Research KuM – Ministry of Culture MAK – county development centre MKM – Ministry of Economic Affairs and Communications RD – research and development TalTech – Tallinn University of Technology TDH – Tallinn Design House TLI – Tallinn Creative Incubator TLU – Tallinn University UT – University of Tartu		

STRATEGIC LINES

Strategic lines / stakeholders	Education and research	Design community	Users of design (public, third and private sectors)	Policy-makers	The public
<p>1. Promoting design capabilities, in order to achieve globally increasing competitiveness of Estonian design.</p>	<p>Creating an integral design education model in cooperation with stakeholders, which is adaptable to the developments in design, and values professional and research-based approach. EXECUTOR: members of the Round Table of Design Education (EAA, TalTech, TLU, Tartu Art School, Pallas University of Applied Sciences, UT Viljandi Culture Academy, Kuressaare Regional Training Centre, Estonian Entrepreneurship University of Applied Sciences, UT Pärnu College, TLU Haapsalu College) in cooperation with HTM. Coordinator: EAA.</p>	<p>Developing lifelong learning of designers for professional self-improvement and acquisition of contemporary skills, continuing training and retraining, involving the best Estonian and international competencies. Developing specific skills of designers for managing complexities, new technologies and other global developments of design, skills to implement design on the level of conversion of systems, transdisciplinary cooperation skills. EXECUTOR: professional associations in cooperation with educational institutions. Supported by EDK.</p>	<p>Relating design education with the curricula of other fields, in order to raise design awareness and to implement knowledge and skills for strategic use of design. EXECUTOR: All educational institutions providing design education. Supported by EDK.</p>		<p>Increasing the potential of design hobby education. EXECUTOR: educational institutions providing design education.</p>
	<p>Updating design training on all levels of education, matching it with future development needs of international labour market and society, not forgetting traditional basic skills and knowledge of designers. EXECUTOR: members of the Round Table of Design Education. Supported by EDK.</p>	<p>Systematic mapping of professional standards of designers and development of professionalism. EXECUTOR: EDK in cooperation with EDL and educational institutions.</p>	<p>Making design education a part of lifelong learning of other fields. Providing various design training courses, in order to raise design awareness and to implement knowledge and skills for strategic use of design. EXECUTOR: All educational institutions providing design education, organizations providing continuing training in the field. Supported by EDK.</p>		<p>Introducing new design trends and professional developments. EXECUTOR: EDK. Supported by EDL.</p>

STRATEGIC LINES

	<p>Making research and development (RD) a natural part of design education, as in other specialities. Increasing research capability. EXECUTOR: universities, ETDM.</p>	<p>Developing initiative of the design field and relevant competencies of designers (brand building, other complex skills). EXECUTOR: TLI, Creative Estonia, EDK, professional associations, TDH.</p>	<p>Supporting improvement of design capabilities of Estonian companies and public sector for coping with complexities and technological development, user-friendly development of products, services and environments, and bringing innovative products/services to global market. EXECUTOR: EDK in cooperation with EAS and MAKs, TLI and TDH.</p>	<p>Raising awareness of integrating design principles with policy-making and involvement of citizens, and developing relevant skills. EXECUTOR: EDK.</p>	<p>Dealing with preservation and availability of design heritage. EXECUTOR: ETDM. Supported by EDL.</p>
	<p>Developing relevant indicators for measuring the developments in the field of design</p>				
<p>Indicators</p>	<ul style="list-style-type: none"> • Number of updated curricula • Number of RD projects • Number of graduates from design curricula • Number of curricula meeting professional standards 	<ul style="list-style-type: none"> • Number of provided continuing training courses per year • Number of graduates from continuing training courses per year • Availability of professional standards or other mapped competencies 	<ul style="list-style-type: none"> • Number of curricula including design study of different levels for non-designers • Number of curricula improving design competencies and their graduates • Explanatory examples of real positive measurable changes created with the support of design (environmental protection, usage convenience, sustainability, time, increase of turnover, profitability, export growth, etc) 	<ul style="list-style-type: none"> • Implemented cooperation measures and legislation promoting innovation • Number of curricula improving design competencies and their graduates 	<ul style="list-style-type: none"> • Annual design overview prepared by EDK • Design coverage in media • Volume of digitized materials • Number of exhibitions per year

STRATEGIC LINES

<p>2. Implementing design capabilities, in order to resolve complicated (complex) problems and to keep pace with technological development, to develop innovative products and services, increasing social welfare and supporting economic growth.</p>	<p>Visualizing the use of professional design and related positive changes / profitability in implementation of new technologies. This ensures changing opinion of the role of design in the establishment of relationships between people and new technologies, better setting of new technological developments into context, and resulting better use of technological developments and development of innovative products/services. EXECUTOR: EDK in cooperation with universities.</p>			
	<p>Dealing with contemporary rendering of the concept and image of design, taking account of the developments in design, making positive changes resulting from the professional use of design visible when developing products and services. This will change comprehension of the effects of using design, including when managing complex problems. EXECUTOR: EDK.</p>			
	<p>Launching transdisciplinary projects for resolving complex problems of the society, including in international cooperation (in health care, etc), involving designers. EXECUTOR: EDK, EDL, educational institutions, other professional associations.</p>			
	<p>Launching systematic research for collecting comparable data of the contribution of design into economy and improvement of business, of the viability of design, etc. EXECUTOR: EDK in cooperation with the Ministry of Culture (KuM), the Ministry of Economic Affairs and Communications (MKM), and EAS.</p>		<p>Highlighting professional use of design. EXECUTOR: EDK.</p>	
	<p>Guiding and supporting organizations in implementation of professional design, for creating new products and services based on new technologies / developing further the existing ones. EXECUTOR: EDK in cooperation with the Chamber of Commerce and Industry, KuM, MKM.</p>			
<p>Indicators</p>	<ul style="list-style-type: none"> • Explanatory examples of real positive measurable changes created with the support of design (environmental protection, usage convenience, sustainability, time, increase of turnover, profitability, export growth, etc) • Number of professional designers in an organization • Number and extent of transdisciplinary projects • Adopted cooperation measures • Regular research covering the impact of design, developments, etc 			<ul style="list-style-type: none"> • Annual design overview prepared by EDK • Coverage of design in media
	<ul style="list-style-type: none"> • Changes in turnover and profitability of design companies (design offices and „designer-maker“ companies 			

STRATEGIC LINES

<p>3. Design is a part of the culture.</p>	<p>Increasing international visibility of Estonian design and designers, including marketing of Estonian design, export support measures, design diplomacy (including design ambassadors). EXECUTOR: EDL, EDK, Creative Estonia, TLI, EFBA, ETDM in cooperation with the Ministry of Culture and MKM.</p>				
		<p>Cooperation for entering export markets, including through development of various cooperation methods and support measures, joint entry to foreign markets, marketing and communication activities. EXECUTOR: EDL in cooperation with EDK, other professional organizations and development centres.</p>			<p>Supporting activities related to the promotion of design, targeted to promoting professional design awareness: including Design Night, Design awards, Tallinn Fashion Week, educational broadcasts introducing design in various media channels, articles and posts in printed and social media. EXECUTOR: EDK, EDL, Creative Estonia, TLI and TDH, other umbrella organizations.</p>
		<p>Launching grants and loan guarantees to innovative small design companies. EXECUTOR: EDL (To be accomplished in cooperation with industry, and KuM and MKM.)</p>			<p>• Annual design overview prepared by EDK • Design coverage in (international) media • Increasing e-sale of Estonian design products</p>
<p>Indicators</p>		<ul style="list-style-type: none"> • Export growth of design companies • Number of international cooperation projects • Number of international events 			