

Beijing, China

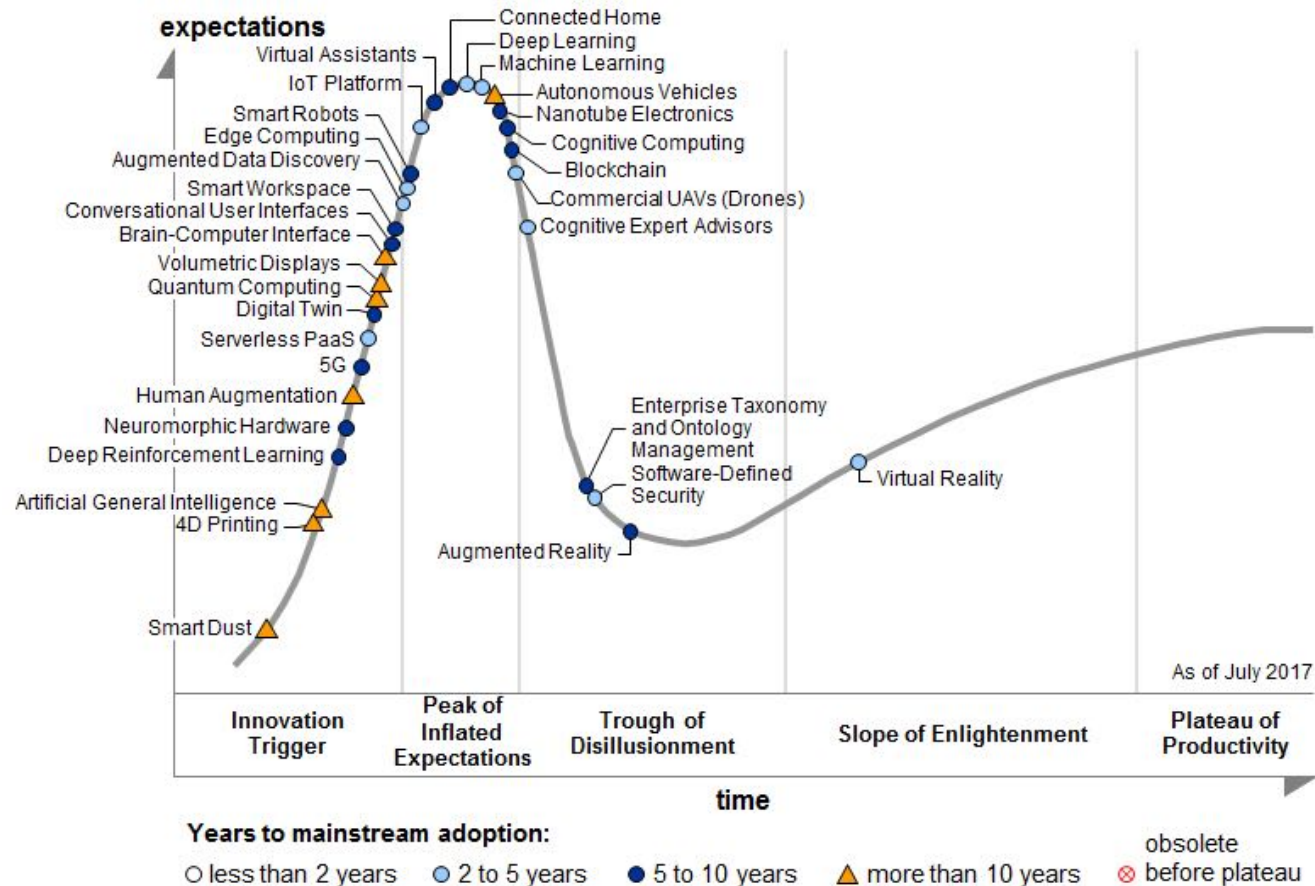
Educating designers in the context of innovation and entrepreneurship

Zhiyong Fu

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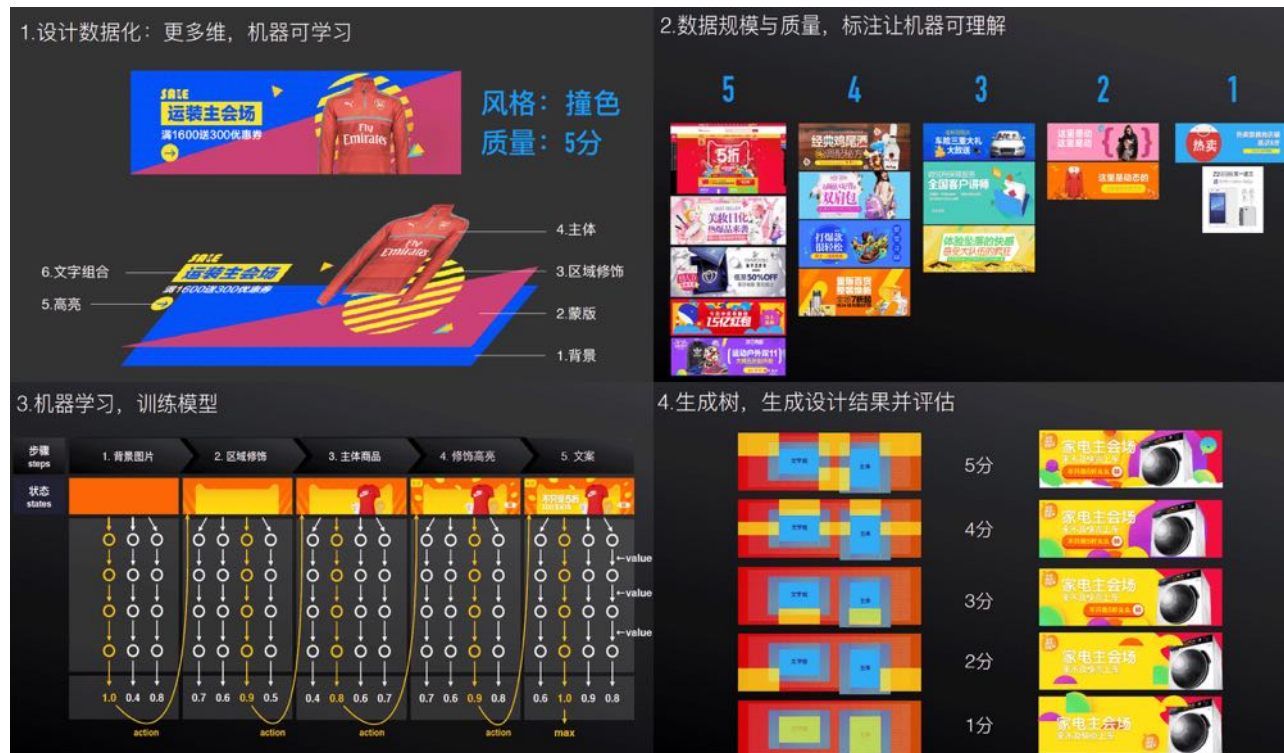
Gartner Hype Cycle for Emerging Technologies



What if: Sophia as a designer?



Designers: AI Are Coming For Your Jobs



2016 double 11 period, **Luban**, according to the theme and consumer characteristics of personalized presentation, the production of a material of **170 million** orders of magnitude, put in the form of advertising in the face of thousands of thousands of people in the 11.

The 27 day of the Ali group UCAN2017 designer of the year meeting, Ali officially disclosed artificial intelligence design system of "Luban", the last 11 double production of smart brain 170 million design material, **the design industry impact will be hitherto unknown.**

Luban : famous Ancient skilled Chinese craftsmen

Design thinking involves observation to discover unmet needs within the context and constraints of a particular situation. It frames the opportunity and scope of innovation, generating creative ideas, testing and refining solutions. It creates a repeatable and scalable process for innovation.

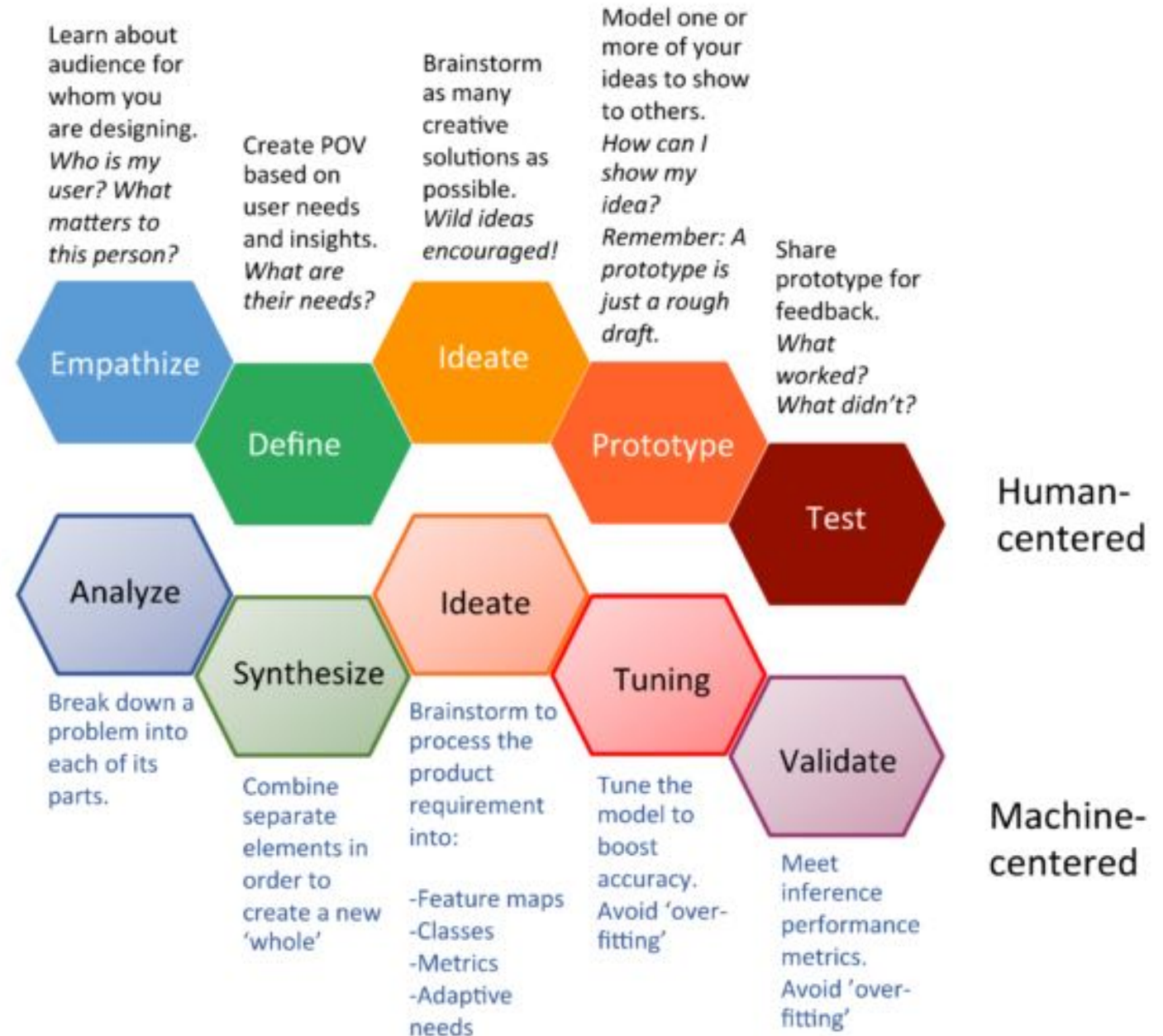
Design Thinking

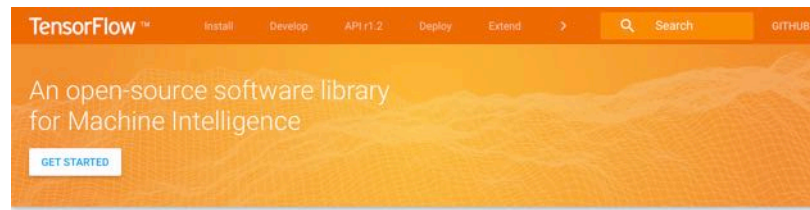
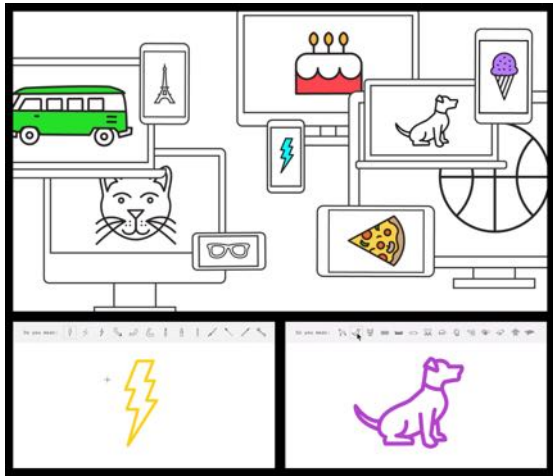
designs products this way...

refines, tunes and predicts this way...

Machine Learning

Machine learning is a method of data analysis that automates analytical model building. Using algorithms that iteratively learn from data, *machine learning* allows computers to find hidden insights without being explicitly programmed where to look.





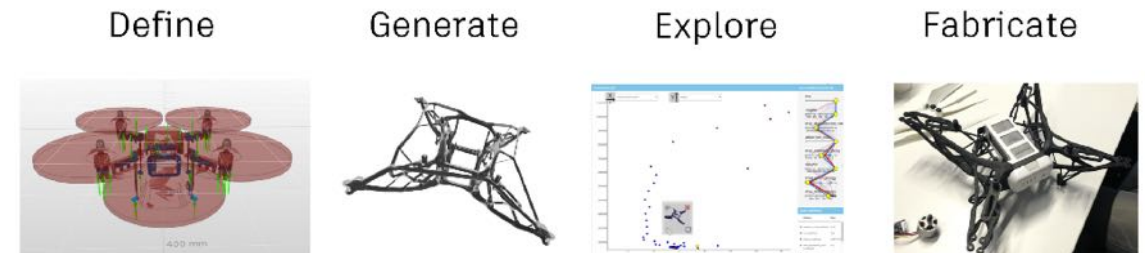
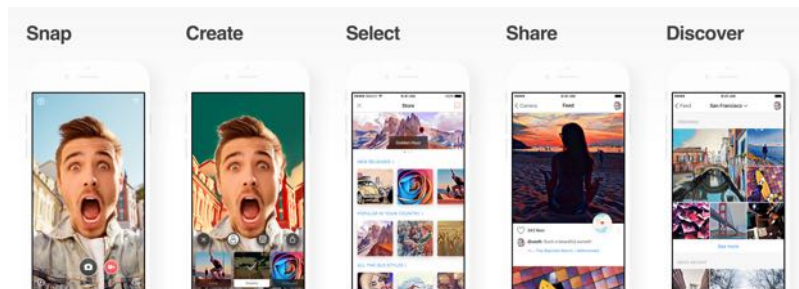
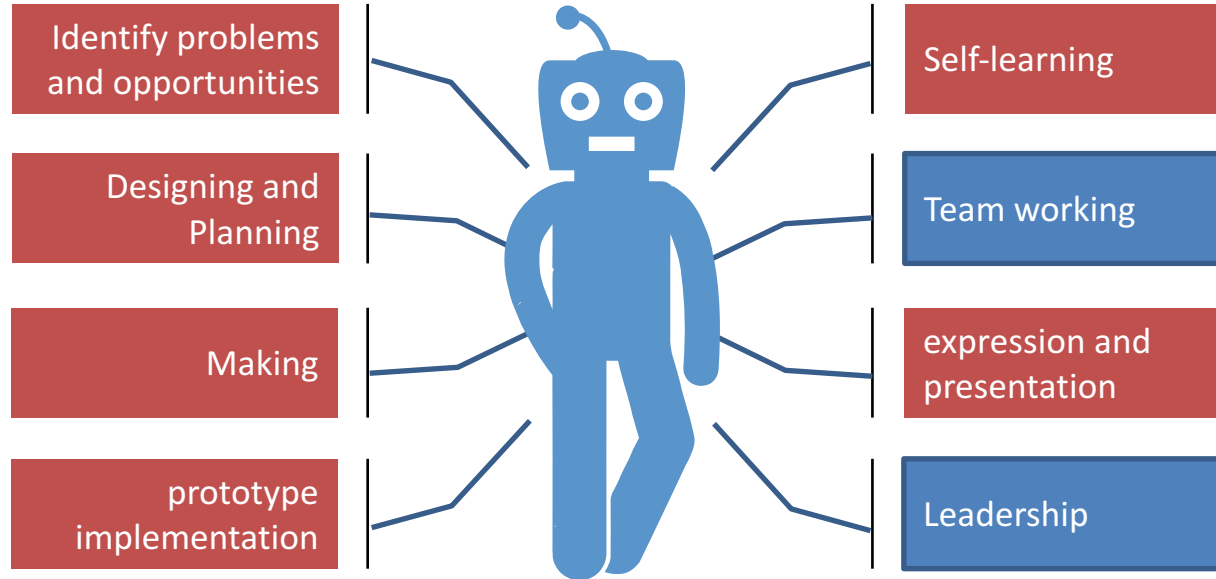
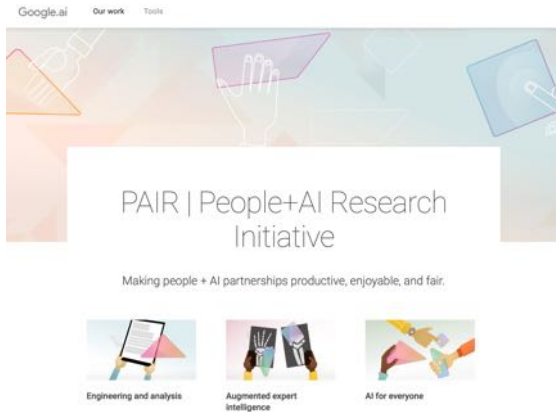
TensorFlow 1.2 has arrived!



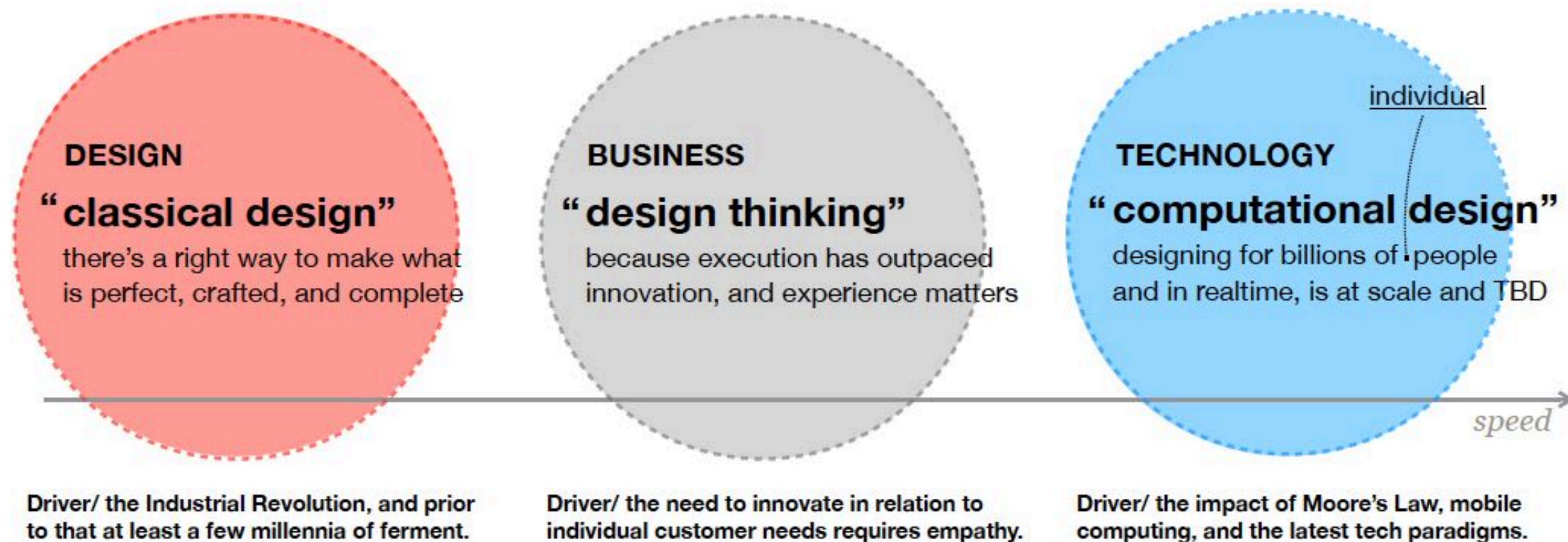
Introducing TensorFlow Research Cloud



The 2017 TensorFlow Dev Summit



There Are Three Kinds of Design At Play. We Need To Be Specific.



The two growing categories of “designers” are those coming from Business and Technology. The three categories above are co-dependent — you must embrace at least two of these categories in order to win in this century.

Source: @kpcb #DesignInTech @johnmaeda
<http://kpcb.com/design>



Anidraw-

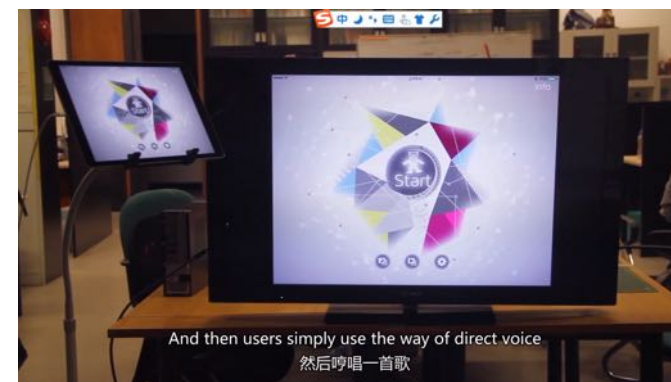
AniDraw: When Music and Dance Meet Harmoniously

—AAAI2017

韬然
的世界
Taoran's
World



draw the most basic pictures or arrange dances
使普通用户



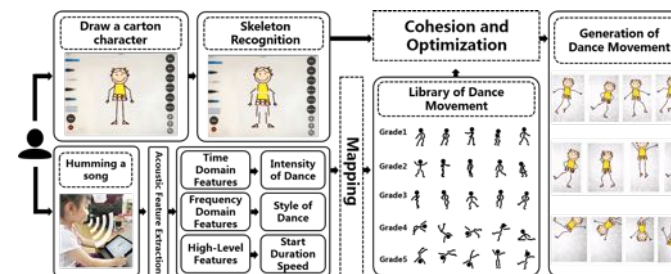
And then users simply use the way of direct voice
然后哼唱一首歌



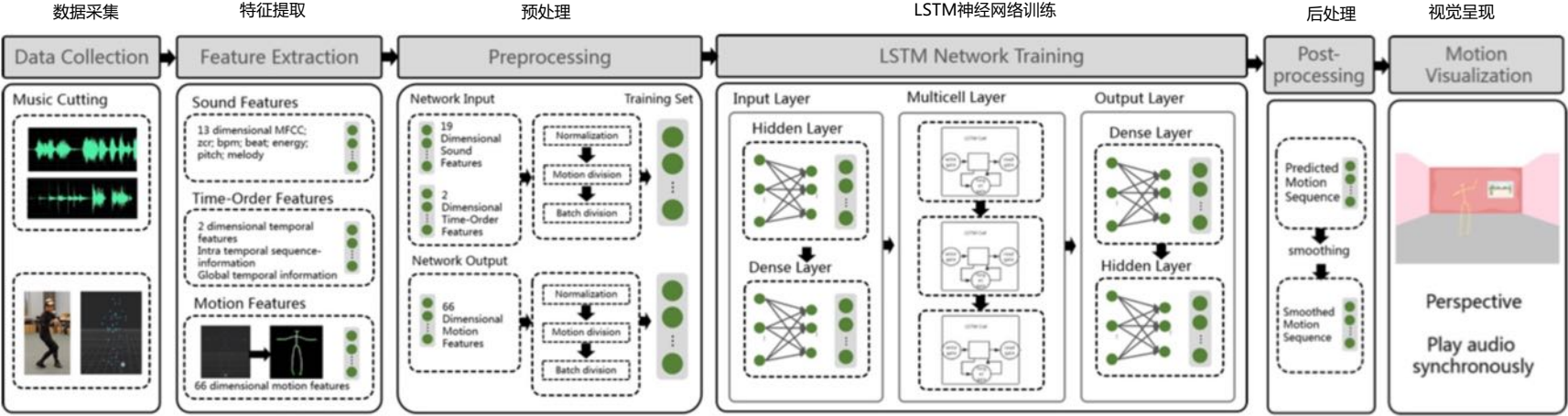
1.绘制卡通人物



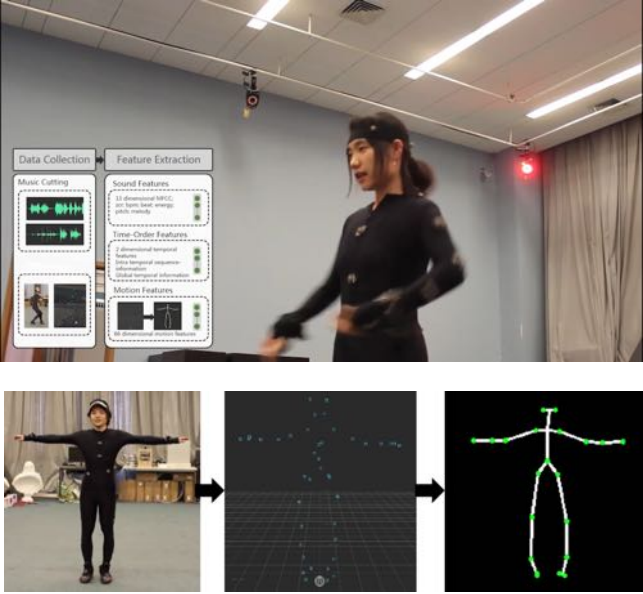
2.人物随用户歌声跳舞



模拟真实绘图场景



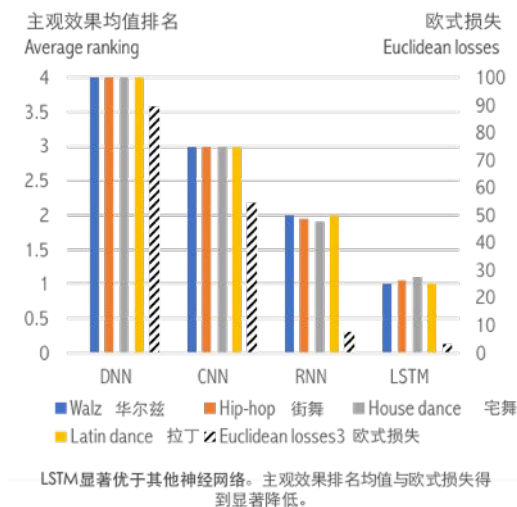
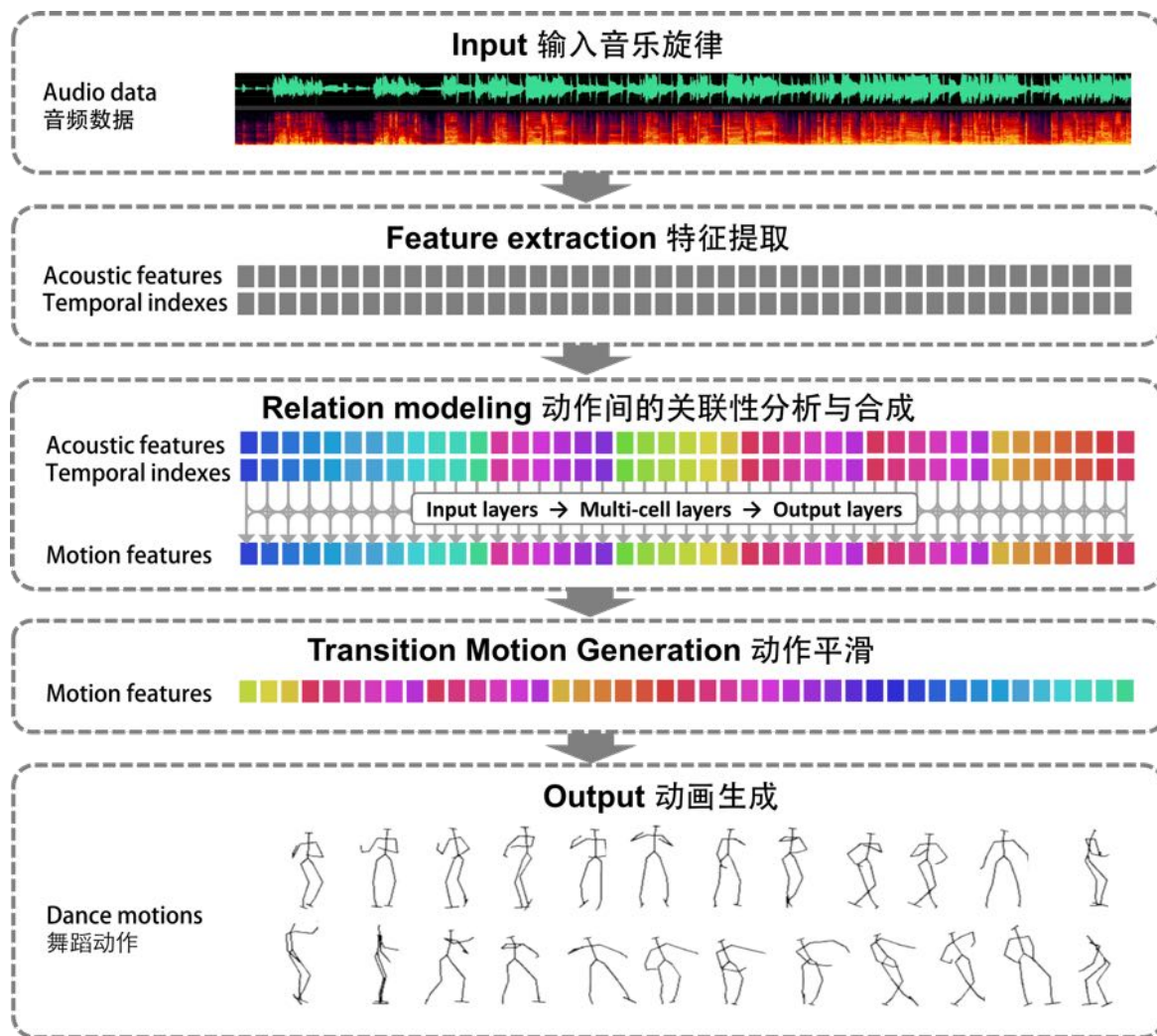
系统框架



Joint	Abbreviation	Definition
Center	Center	m_1^1, m_1^2, m_1^3
Head-left	Avg(LFHD LBHD)	m_1^4, m_1^5, m_1^6
Head-right	Avg(RFHD RBHD)	m_1^7, m_1^8, m_1^9
Waist	Avg(T10 STRN)	$m_1^{10}, m_1^{11}, m_1^{12}$
Showder-left	LSHO	$m_1^{13}, m_1^{14}, m_1^{15}$
Elbow-left	LELB	$m_1^{16}, m_1^{17}, m_1^{18}$
Wrist-left	LFRM	$m_1^{19}, m_1^{20}, m_1^{21}$
Hand-left	LFIN	$m_1^{22}, m_1^{23}, m_1^{24}$
Hip-left	Avg(LFWT LBWT)	$m_1^{25}, m_1^{26}, m_1^{27}$
Knee-left	LKNE	$m_1^{28}, m_1^{29}, m_1^{30}$
Ankle-left	LANK	$m_1^{31}, m_1^{32}, m_1^{33}$
Heel-left	LHEE	$m_1^{34}, m_1^{35}, m_1^{36}$
Toe-left	LTOE	$m_1^{37}, m_1^{38}, m_1^{39}$
Showder-right	RSHO	$m_1^{40}, m_1^{41}, m_1^{42}$
Elbow-right	RSHO	$m_1^{43}, m_1^{44}, m_1^{45}$
Wrist-right	RFRM	$m_1^{46}, m_1^{47}, m_1^{48}$
Hand-right	RFIN	$m_1^{49}, m_1^{50}, m_1^{51}$
Hip-right	Avg(RFWT RBWT)	$m_1^{52}, m_1^{53}, m_1^{54}$
Knce-right	RKNE	$m_1^{55}, m_1^{56}, m_1^{57}$
Ankle-right	RANK	$m_1^{58}, m_1^{59}, m_1^{60}$
Heel-right	RHEE	$m_1^{61}, m_1^{62}, m_1^{63}$
Toe-right	RTOE	$m_1^{64}, m_1^{65}, m_1^{66}$
Dance type	DANCE	m_1^{67}

Previous studies such as the study performed by (Katerina F, Sergey I. etc. 2017) extracted motion features from videos. However, since these motion features were based on 2D-spaces. Biological observations suggest that humans can recognize actions from just the motion of a few light displays attached to the human body (Johansson 1973). Existing datasets mainly including SBU Kinect interaction dataset (Yun et al. 2012) contains 230 sequences of 8 classes totally 6614 frames, HDM05 dataset (Muller et al. 2007) contains 2,337 skeleton sequences totally 184046 frames, and CMU dataset (CMU 2003) contains 2235 sequences totally 987341 frames and is the largest skeleton based human action dataset so far. But there are only 64300 frames for pure dance motions in CMU data sets, And these dance motions are discontinuous but also have no accompaniment to match themselves.

建立了全球已知最大的高完整度的3D舞蹈动作+音乐开源数据集，邀请专业的舞蹈演员表演。涵盖4种舞蹈，共计684000帧连续数据，67维动作特征+19维声学特征+2维时序索引特征



高精准度的动画训练与生成方式

World Creativity and Innovation Day - 21st April

Acknowledging that innovation is essential for harnessing the economic potential of each nation and the importance of supporting **mass entrepreneurship, creativity and innovation**, which create new momentum for economic growth and job creation and expand opportunities for all, including women and youth,



mass innovation and entrepreneurship

INDIEGOGO

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China, meet Indiegogo.

We've seen an explosion of cool products from China launching to the rest of the world. But international crowdfunding can be challenging without the right tools and support. We want to make it easier with Indiegogo's new China Pilot Program, which includes specialized guidance (in both English and 中文!) to help China-based companies debut new products to a global audience.

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众筹中

babytalk
群 达 托 托

语音交互儿童陪伴机器人



机智听说·陪伴有我



Babytalk机器人

已筹到

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当前进度34%

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机 智 听 说 · 陪 伴 有 我

项目发起人



ganweiro...

来自清华的高颜值智能团队，打造原创的...

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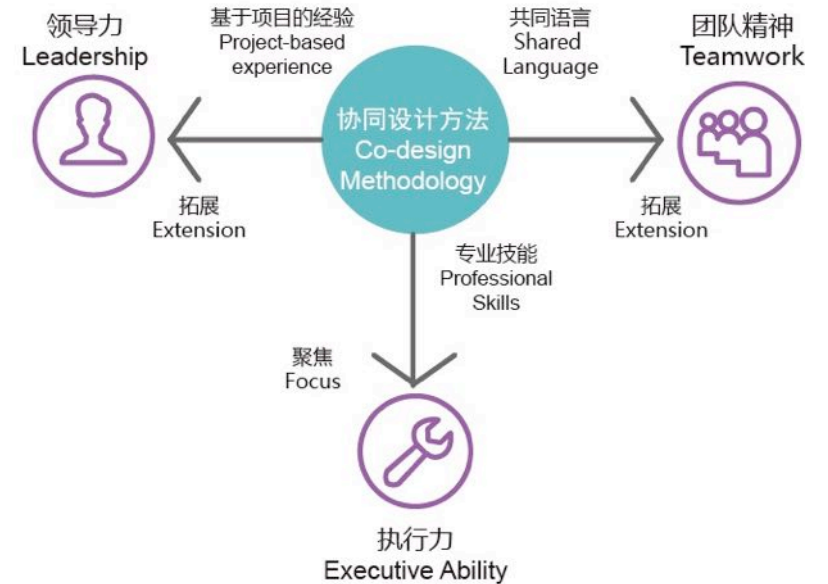
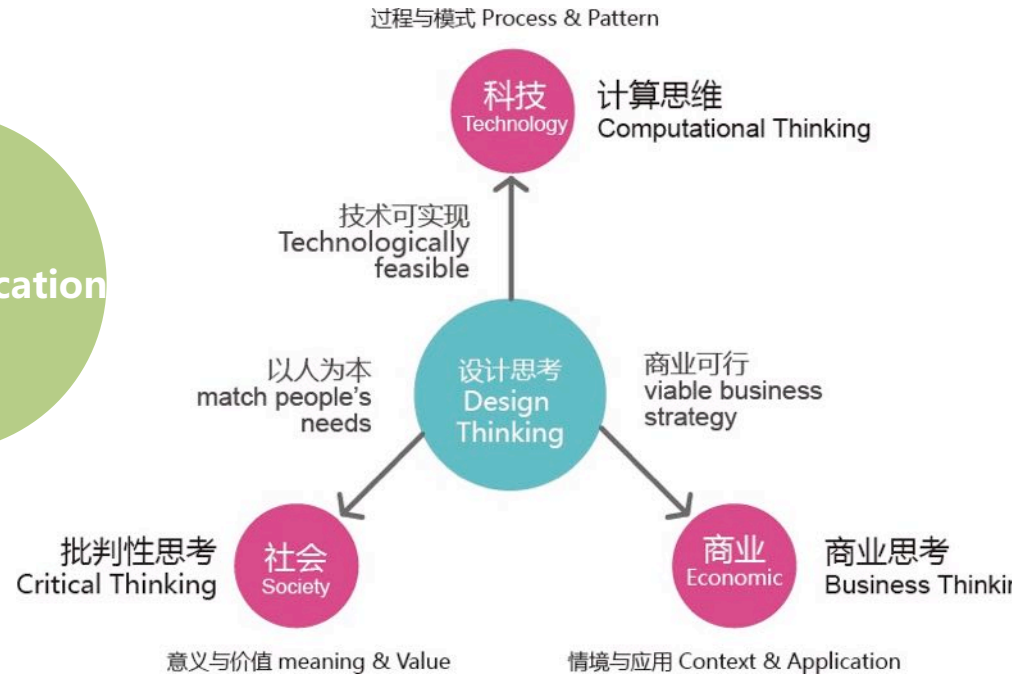
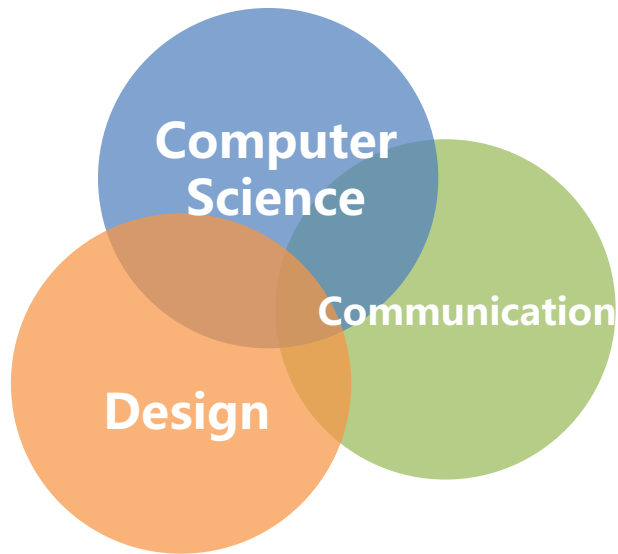
WORLD

DESIGN ORGANIZATION

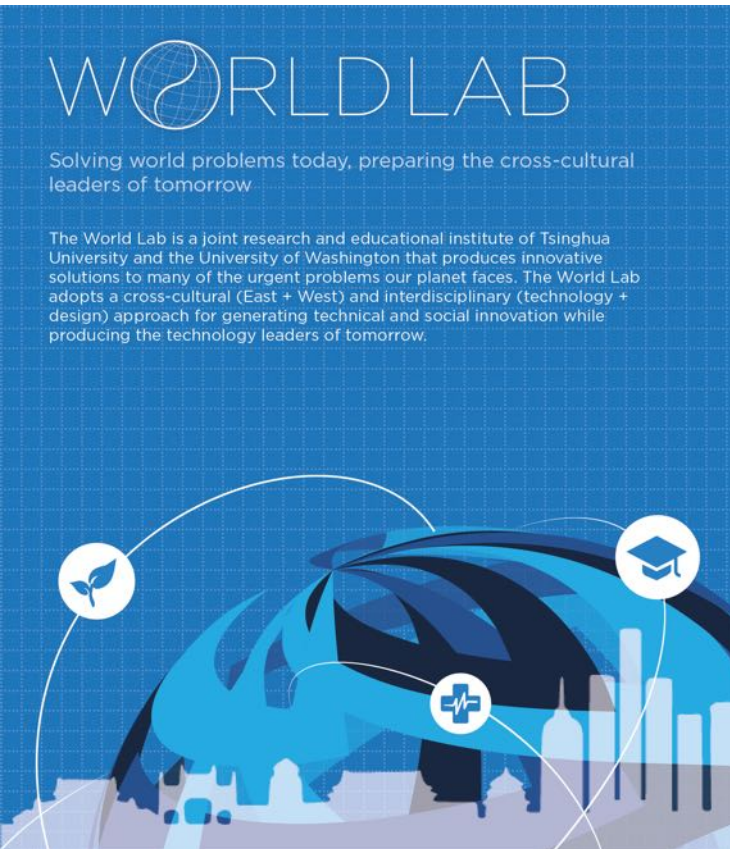
The World Design Organization (**WDO**)™, formerly the International Council of Societies of Industrial Design (**Icsid**), is an international non-governmental organization founded in 1957 to promote the profession of industrial design.

Industrial Design is a **strategic problem-solving process** that drives **innovation**, builds business success, and leads to a better quality of life through **innovative** products, systems, services, and experiences. Industrial Design bridges the gap between what is and what's possible. It is a **trans-disciplinary** profession that harnesses **creativity** to resolve problems and **co-create** solutions with the intent of making a product, system, service, experience or a business, better. At its heart, Industrial Design provides a more optimistic way of looking at the future by reframing problems as opportunities. It links **innovation**, technology, research, business, and customers to provide new value and competitive advantage across economic, social, and environmental spheres.

2009: Information art and design, Interdisciplinary Design Program



2012: Worldlab in UW — Now: GIX



World Lab Summer Institute Exhibition Beijing

Come join us to see what the students created in the World Lab Summer Institute, the first of a series of World Lab events. Food and drink is on us. It is a great chance to meet top multicultural students in computer science, informatics, design, and digital arts who have an interest in changing the planet together. This select group of students includes the designers, developers and engineers of a better future.

Friday, September 14th

15:00 - 18:00

Academy of Art and Design
Tsinghua University

Please RSVP to
landay+worldlab@cs.washington.edu

worldlab.cs.washington.edu



A New Model for Higher Education

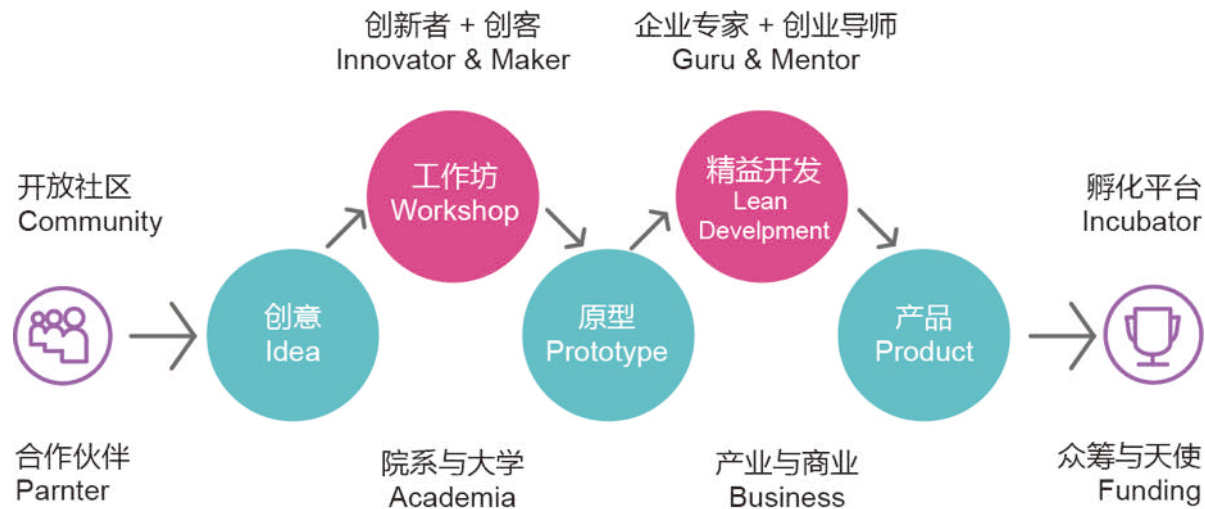


Collaboration Across Boundaries



Drive Solutions for Global Challenges

2013: Designnow—Maker Movement—Design Partner





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U.S.-China Social and Cultural Dialogue

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Media Note

Office of the Spokesperson
Washington, DC
September 29, 2017

U.S. Secretary of State Rex Tillerson and Chinese Vice Premier Liu Yandong co-chaired the first U.S.-China Social and Cultural Dialogue (SCD) September 28, 2017, in Washington, D.C. President Donald Trump and President Xi Jinping launched the SCD in April 2017, at Mar-a-Lago. With a focus on seven cooperative areas – education, social development, science and technology, health, subnational, arts and culture, and environment and conservation – the SCD aims to advance our social and cultural relations consistent with the results-oriented approach of the new Comprehensive Dialogue Mechanism.

The new SCD opens doors for our two countries to continue engaging in positive and open conversation on issues and policies that affect the citizens of both our nations, including on topics such as environment and conservation, health security, and science and technology. For decades, exchanges between the United States and China – including on social and cultural issues – have been effective at building understanding, breaking down barriers to a more constructive relationship, and connecting our peoples. As our two peoples connect, they deepen their understanding and trust of each other in ways that can strengthen our partnerships. The SCD showcases how our peoples can live together for the next 50 years and build a shared future. Together, we can nurture greater connections between our scholars, scientists, students, journalists, and non-governmental leaders for the benefit of our two countries and the world.

Cooperative Area One: Education

The United States and China both recognize that by encouraging our respective students to study in each other's countries, promoting exchanges between our respective scholars, and facilitating networks between our academic institutions, we promote mutual understanding and expand people-to-people ties, the foundation for stronger relations. Facilitating opportunities for Chinese and American students, scholars, and academic institutions brings our two countries closer.

The United States and China plan to partner to promote educational opportunities in the United States for Chinese students, and opportunities in China for American students. China welcomes the U.S. Embassy's "EducationUSA" public diplomacy programming.

The Fulbright Program is the United States' oldest international educational exchange. Working with China, the United States is committed to ensuring that the U.S.-China Fulbright Program continues to increase mutual understanding between the American and Chinese people. The United States and China announced the signing of the Memorandum of Understanding on the U.S.-China Teachers of Critical Languages Program. Both sides commit to jointly carry out activities including conferences for students, scholars, and alumni, including those from the Fulbright Program. China committed to establish a "Short Term Scholarships for Outstanding Students" program, in which the Chinese government plans to provide 10,000 credit scholarships to U.S. students in the next four years.

China committed to work with the private sector and plans to set up a number of U.S.-China Young Makers Exchange Centers in both countries, and to host the U.S.-China Young Makers Competition each year.

Through the U.S. Department of Education and the Chinese Ministry of Education, the United States and China intend to cooperate to enhance Career, Technical, and Vocational Education in both the United States and China.

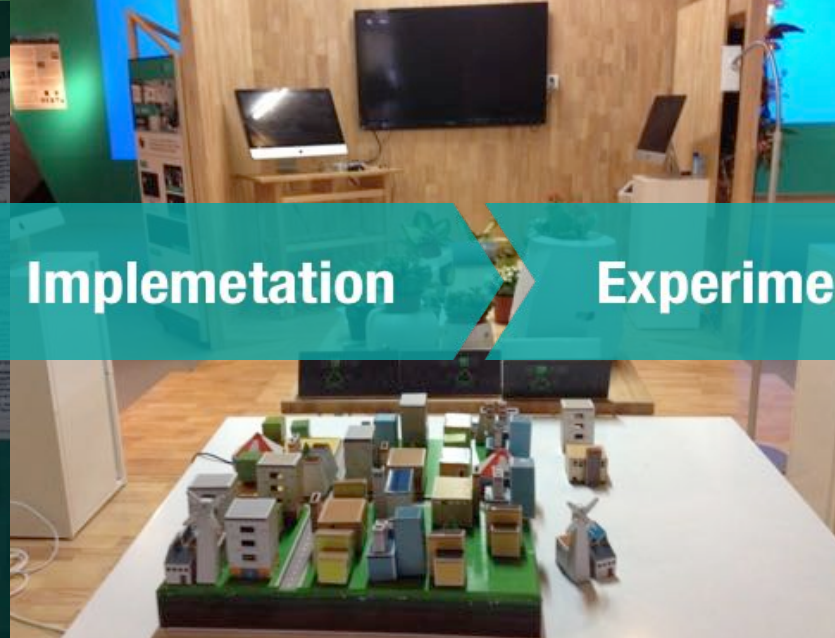
2015: Living lab—Mass innovation



Identification and
Co-conception



Implementation

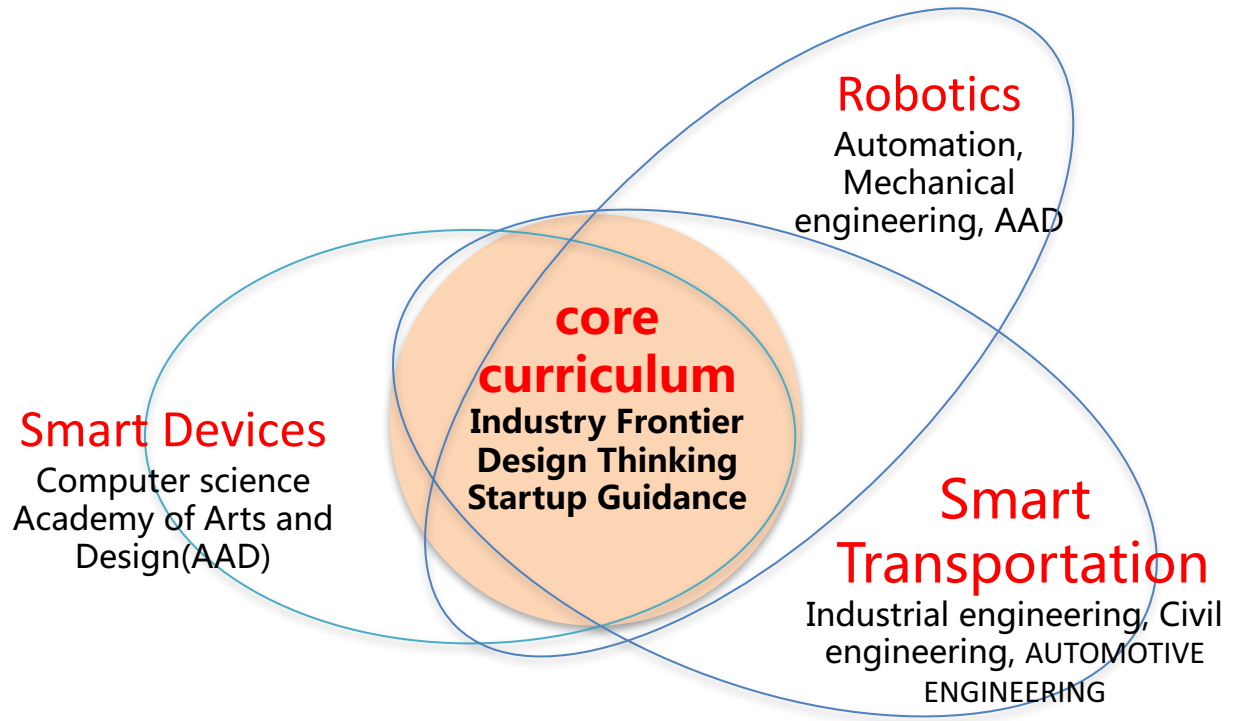
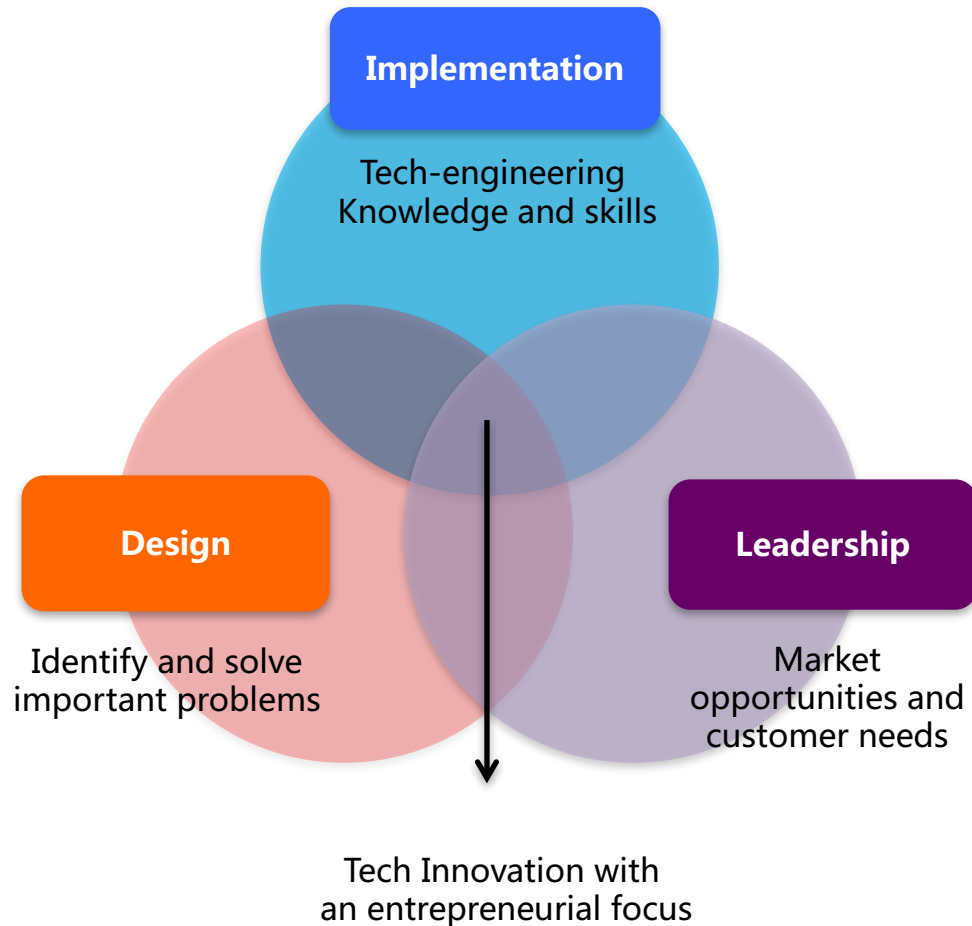


Experimentation

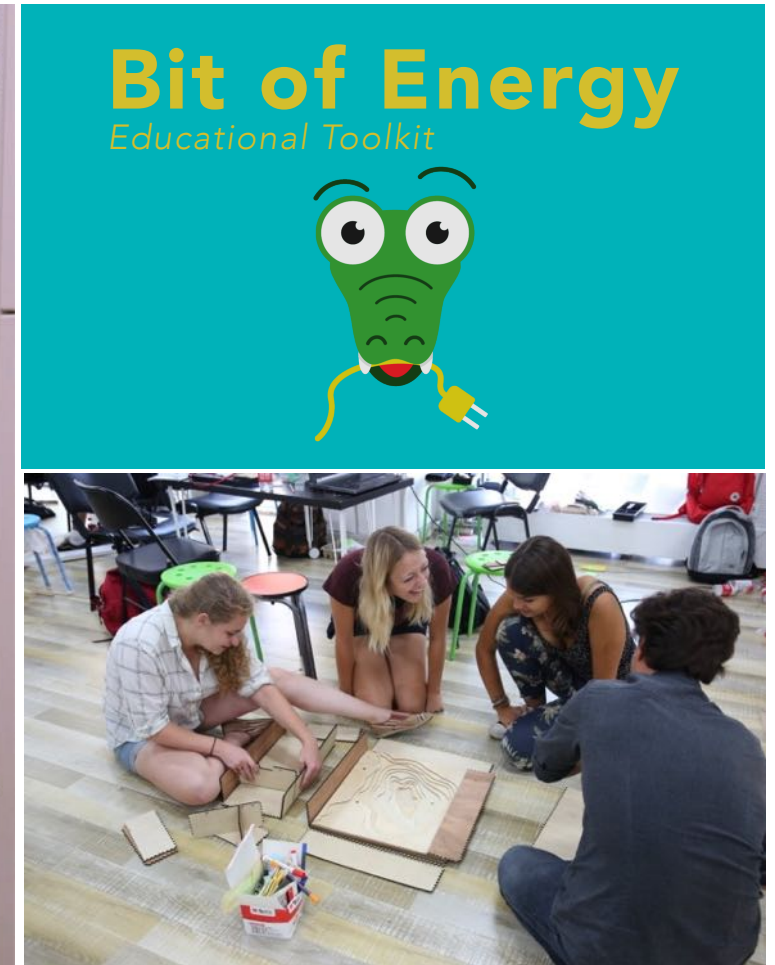


Evaluation

2016: Technology Innovation and Entrepreneurship



2012~2017: Tsinghua Summer Innovation Program



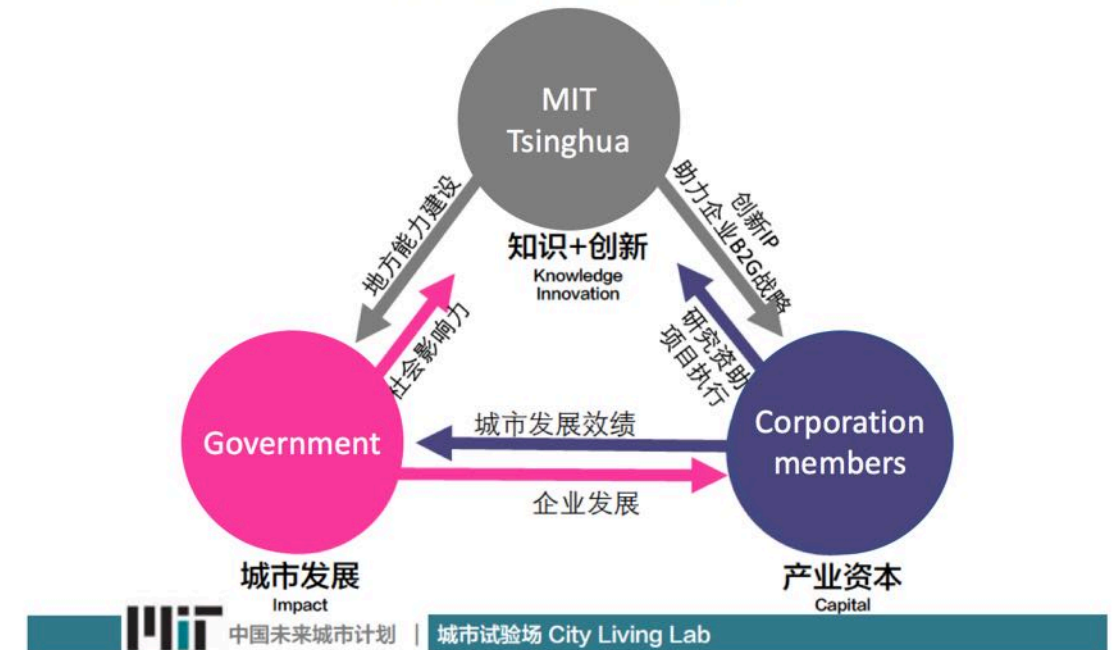
2017: Future City Innovation Connector



未来城市试验场

City Living Lab

Innovation Base in the context of China



New platform:

Creative City Network / The World Design Capital.....

Design Week / World Creativity and Innovation Day

Innovation Lab / Incubator

Impact Hub/ Living Lab /

Co-Working Space

Maker Space/ Fab Lab /

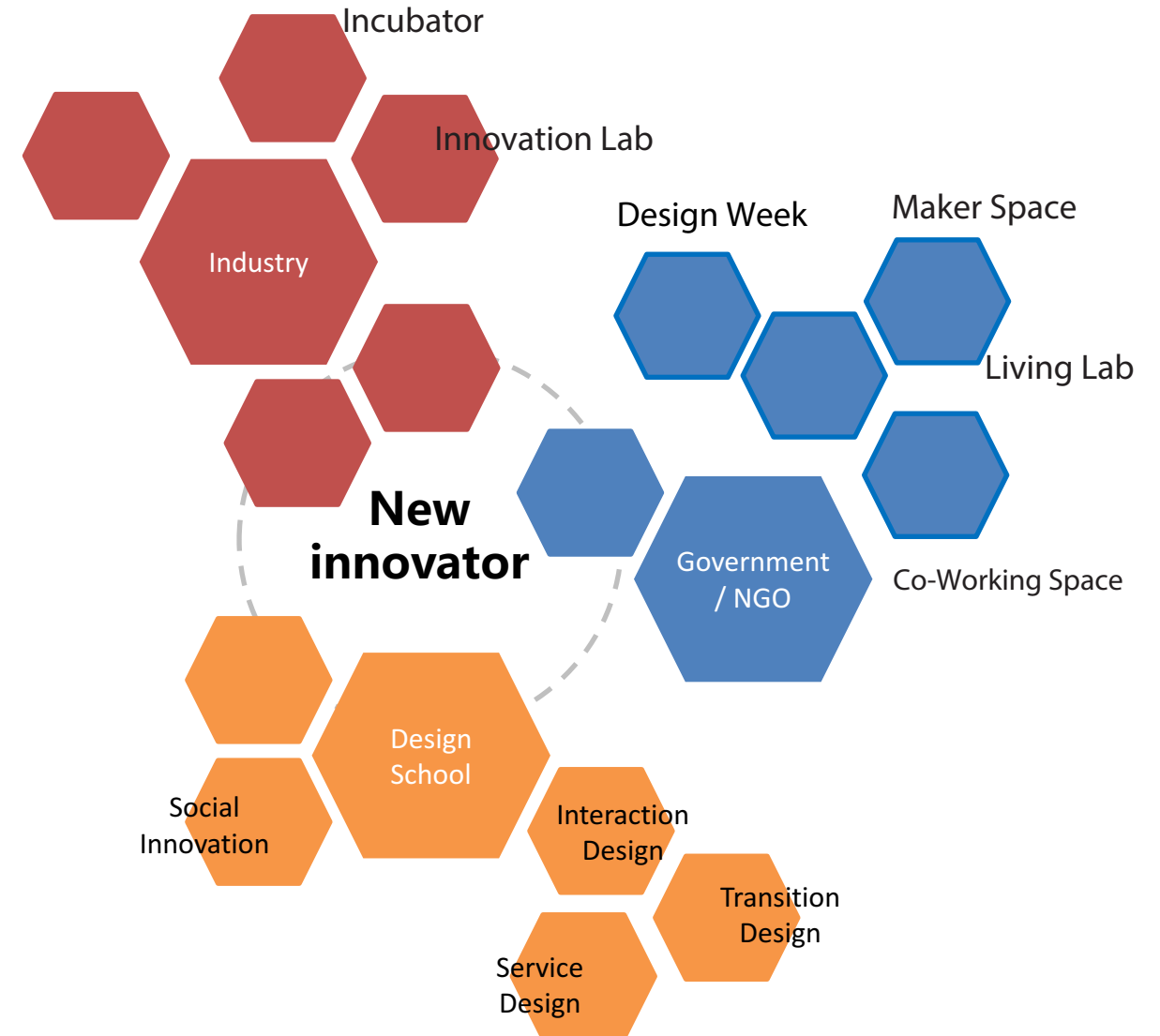
New education model:

The Minerva Project / Alt school /

Stanford d.school / IDeATe at CMU /



- Innovation has become a combination of design, technical realization, social and business value, and corporate ecology.
- University should dedicate to cultivate students' imagination, flexibility, cross-cultural communication skills.
- emphasis more on practical capability and leadership training which can help the team to bring ideas into reality.
- explore the new model to connect the universities and industries.
- It is necessary to integrate innovation and entrepreneurship into the design education system.



Thanks!

Educating designers in the context of
innovation and entrepreneurship

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