



# SDG Open Hack

@Tsinghua University

从创意到可持续影响力!  
From Ideas To Sustainable Impact!

## 第二届清华大学SDG开放创新马拉松挑战赛回顾

Overview of the 2<sup>nd</sup> SDG Open Hack of Tsinghua University 2020

清华x-lab主任 毛东辉

Pearl Mao Director of Tsinghua x-lab

November 29, 2020





# 可持续发展创新

## *Innovation for Sustainability*



- ▶ 联合国可持续发展目标 (Sustainable Development Goals, 缩写: **SDGs**) , 从**社会、经济、环境**从三个维度提出17个新发展目标, 指导2015-2030年的全球发展工作, 到2030年人类要进入可持续发展模式。
- ▶ From the dimensions of society, economy, and environment, 17 new development goals are proposed to guide the global development work from 2015 to 2030. By 2030, humankind must enter a sustainable development model.
- ▶ **创新**是实现目标的关键手
- ▶ **Innovation** for the SDGs is a key factor for success





# 习近平主席论可持续发展

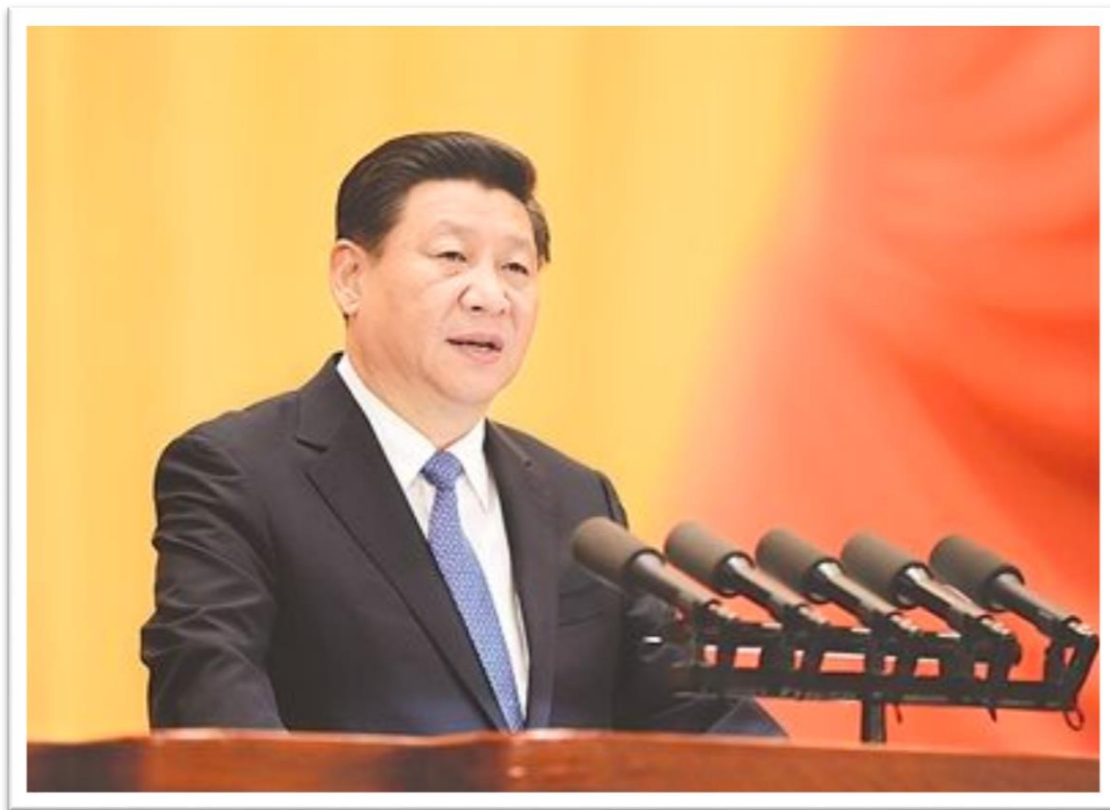
*President Xi Jinping discusses sustainable development*



习近平指出，中国秉持创新、协调、绿色、开放、共享的发展理念，推动中国经济高质量发展，**全面深入贯彻落实2030年可持续发展议程。**

中国积极深化南南合作，推动共建“**一带一路**”同2030年可持续发展议程深入对接，为全球实现可持续发展目标作出积极贡献。

中国寻求落实2030年可持续发展议程的良策，促进共同发展，携手**构建人类命运共同体。**



**President Xi Jinping pointed out that China upholds the development concept of innovation, coordination, green, openness and sharing, promotes the quality development of China's economy, and fully implements the 2030 Agenda for Sustainable Development.**

**China has actively deepened South-South cooperation, promoted the joint construction of "the Belt and Road Initiative" and the 2030 sustainable development agenda, and made positive contributions to the global realization of SDGs.**

**China seeks sound strategies to implement the 2030 Agenda for Sustainable Development, promoting common development and build a community of common destiny.**

# 开展全球行动，携手共创是关键

## *Global collaboration is the key*



### 联合国秘书长 古特雷斯

### Antonia Guterres, Secretary General of the United Nations



国际社会在实现17个可持续发展目标方面取得许多进展，但总体而言，**行动尚未以所需速度或规模推进，需要开启十年“雄心勃勃的行动”**，以便到2030年顺利实现这些目标。开展包括青年、民间社会、媒体、私营部门、工会、学术界以及其他利益相关方在内的全民行动。

The international community has made a lot of progress in achieving the 17 Sustainable Development Goals, but overall, **actions have not yet advanced at the required speed or scale**. It is necessary to start a decade of "ambitious actions" in order to successfully achieve these goals by 2030. **Carry out national actions including youth, civil society, media, private sector, trade unions, academia and other stakeholders.**

### 清华大学校长 邱勇

### Yong QIU, President of Tsinghua University

只有**与联合国各机构建立更紧密、更牢固的伙伴关系**，大学才能为实现可持续发展目标作出贡献；只有**携起手来**，才能**共同实现这一“行动十年”计划**，开创人类更加美好的未来。

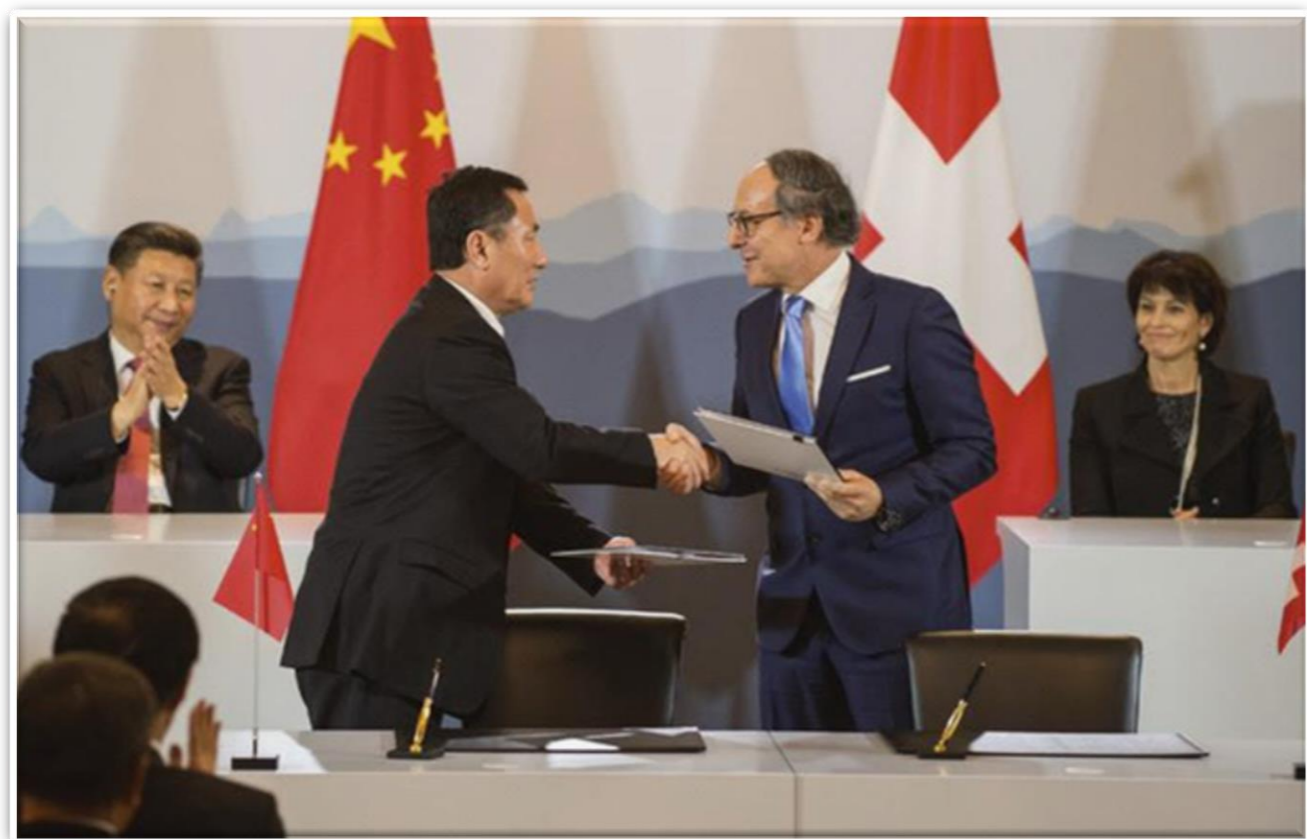
Only by establishing **closer and stronger partnerships with various United Nations agencies**, universities can contribute to the realization of the Sustainable Development Goals; **only by joining hands can we jointly realize this “Decade of Action” plan and create a better future for mankind.**



-----联合国SDG“行动十年”计划大学校长特别会议，2020年7月

# 日内瓦大学与清华大学建立GTI合作

*Partnership between University of Geneva & Tsinghua University*



日内瓦-清华倡议(GTI for SDGs)是与日内瓦国际组织有着密切联系的**日内瓦大学**和**清华大学**之间建立的合作伙伴关系。

2017年1月，中国习近平主席和瑞士联邦主席多丽丝·洛伊特哈德共同见证了清华大学和日内瓦大学签署关于开展可持续发展目标综合教育计划的备忘录。

**The Geneva Tsinghua Initiative (GTI for SDGs) is a partnership between the University of Geneva, with its strong ties to Geneva's international organizations, and Tsinghua University.**

**In January 2017, President Xi Jinping of China and the President of the Swiss Confederation, Doris Leuthard, jointly witnessed the signing of the memorandum between Tsinghua University and University of Geneva on a comprehensive education program for the SDGs.**



# 清华大学“三位一体”的人才培养理念

## *The Three-Pronged Approach of Tsinghua University*

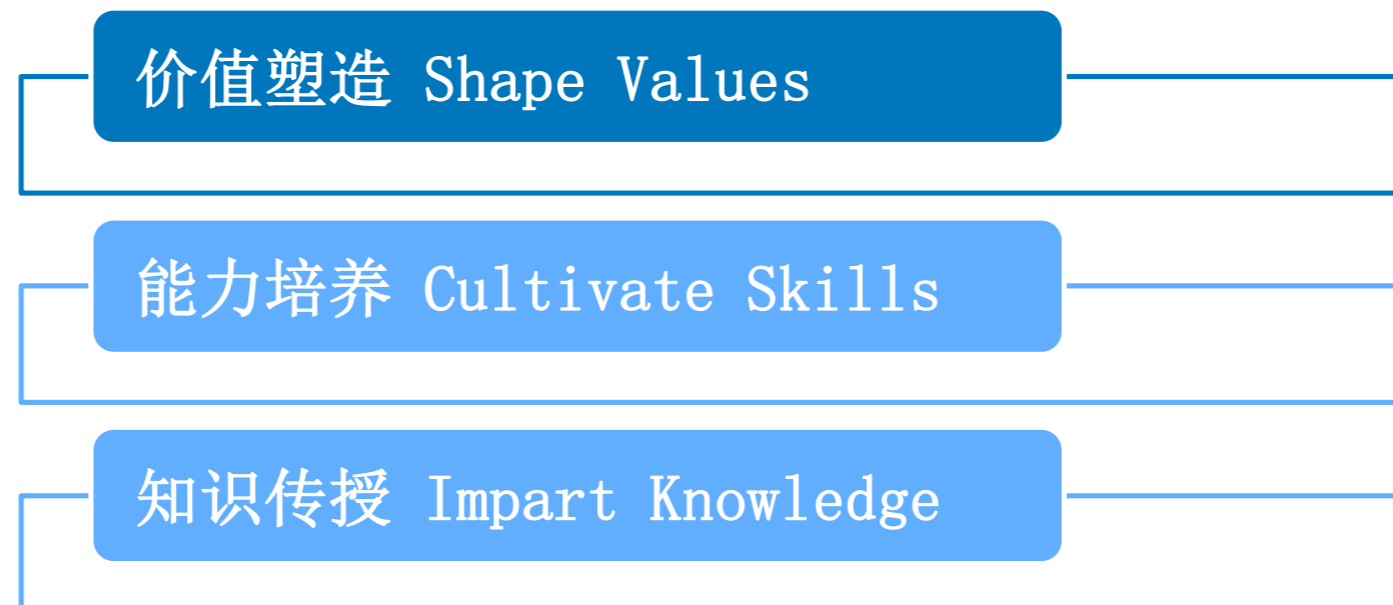


清华大学围绕立德树人的根本任务，确立价值塑造、能力培养和知识传授“三位一体”的教育理念和人才培养模式，致力于培养肩负使命、追求卓越的人，使学生具备健全人格、宽厚基础、**创新思维、全球视野和社会责任感**，实现全面发展和个性发展相结合。

**SDG开放创新马拉松挑战赛**不仅是赛课结合的活动，更融入了独特的**价值取向——可持续发展、创新与国际视野**。青年学生应该具备健全的人格和社会责任感，了解人类所面临的各种挑战，有能力对各种问题进行分析和判断，对国家、民族和人类社会的命运充满关切。

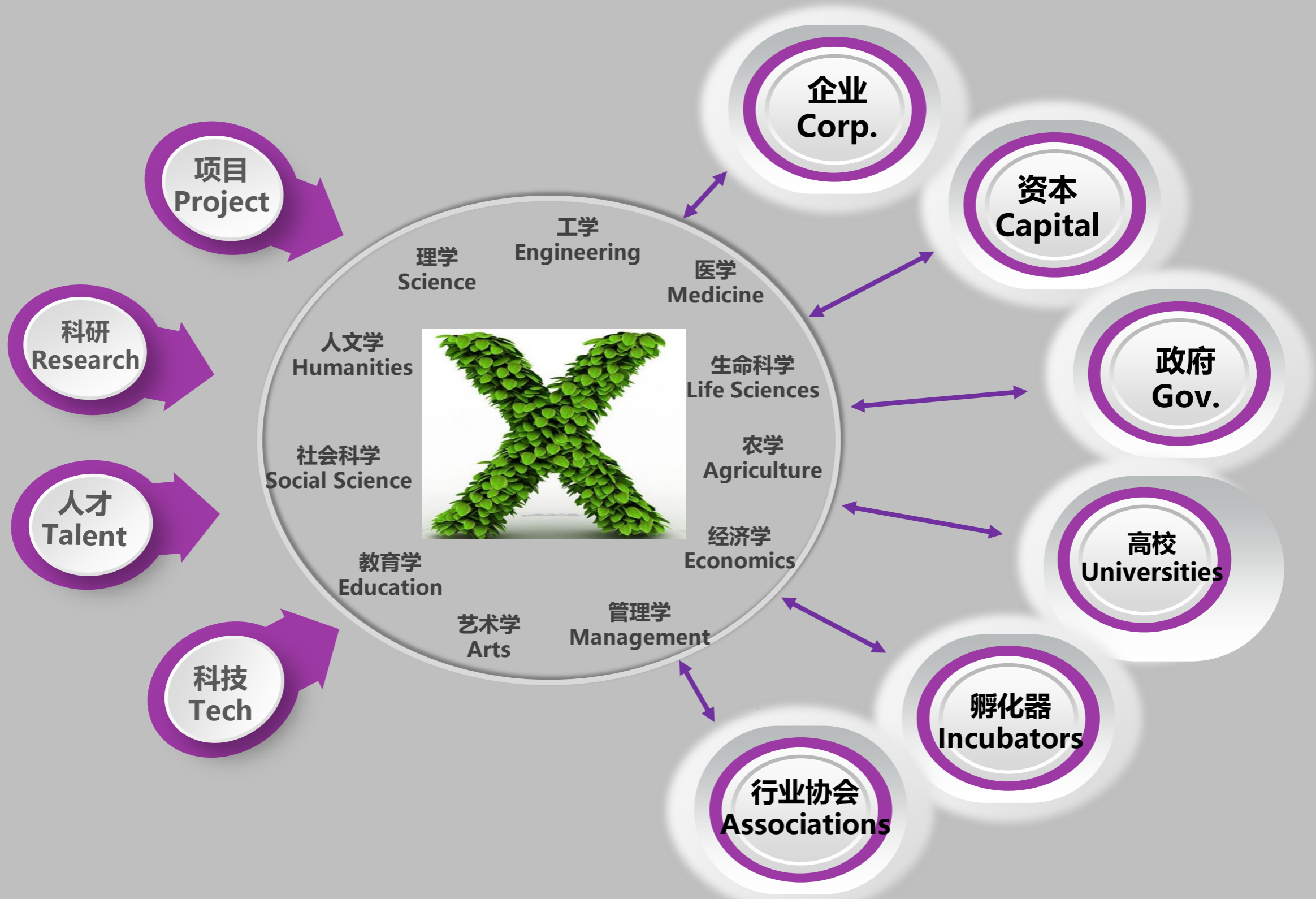
With the central task of talent cultivation, Tsinghua aims to cultivate students who shoulder the mission and strive for excellence through a “Three-Pronged Approach” by integrating the shaping of values, the cultivating of skills and the imparting of knowledge. Students are expected to develop five essential qualities, namely, well-rounded character, solid and broad academic foundation, **innovative thinking, global perspective and social commitment**, achieving a combination of comprehensive development and individual development.

**SDG Open Innovation Hackathon** Challenge is not only a combination of competition and classes, but also a unique **value orientation** about **sustainable development, innovation and global mindset**.



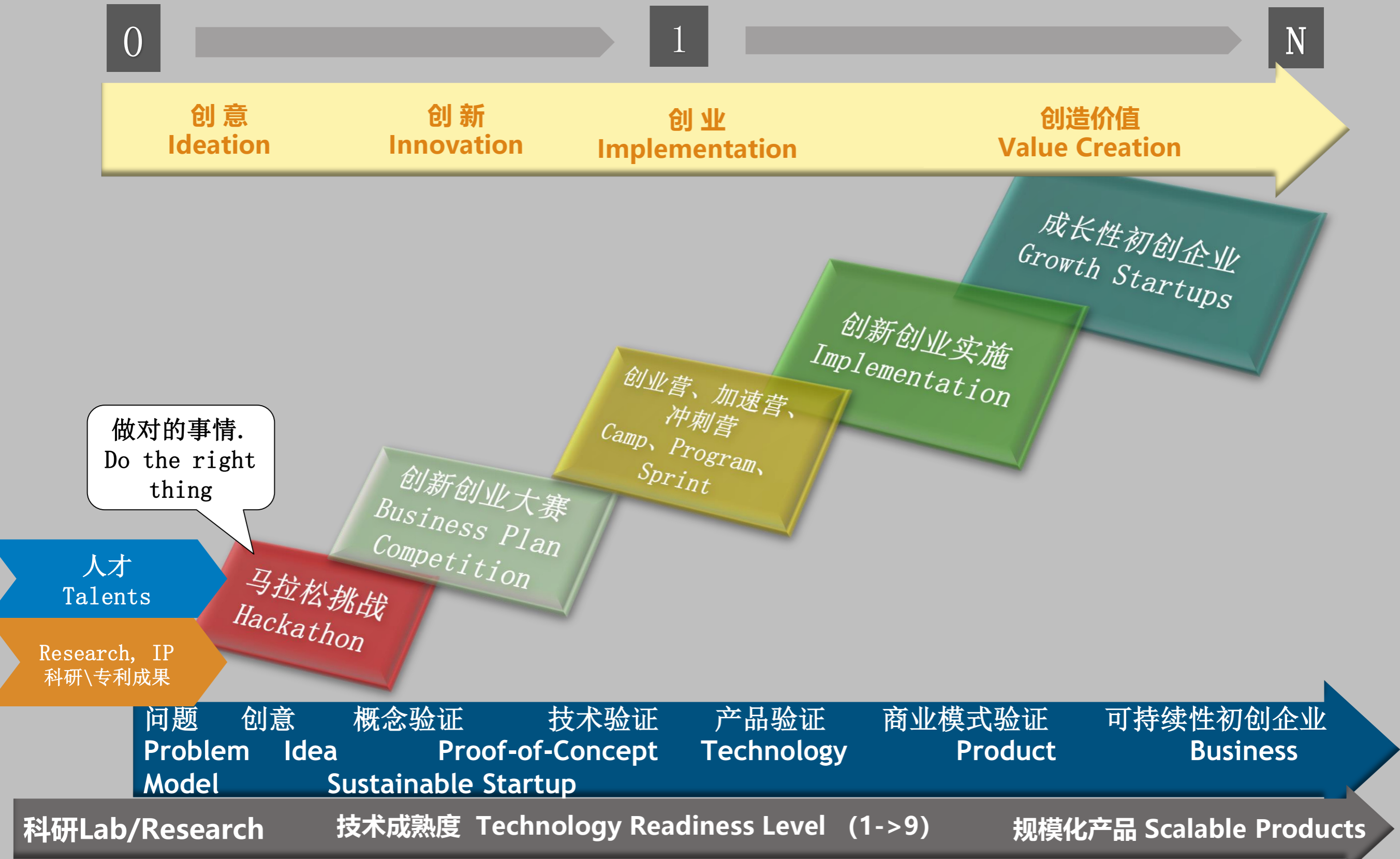
# 可持续发展创新----需要跨学科、跨领域的交叉合作与开放环境

*Sustainable Innovation requires an open cooperative environment across disciplines and fields*



# 创新是从创意到产品的实现过程，从马拉松挑战开始！

*Innovation is a new implementation from idea to Product, which can begin from Hackathon!*



做对的事情.  
Do the right thing



# 清华大学SDG 开放创新马拉松挑战赛

## SDG Open Hack @ Tsinghua University



2019年，清华x-lab将瑞士日内瓦“**Open Geneva**” 活动方式引入清华大学，融入了联合国可持续发展目标SDGs为主题，开发设计了“**清华大学SDG开放创新马拉松挑战赛**”。

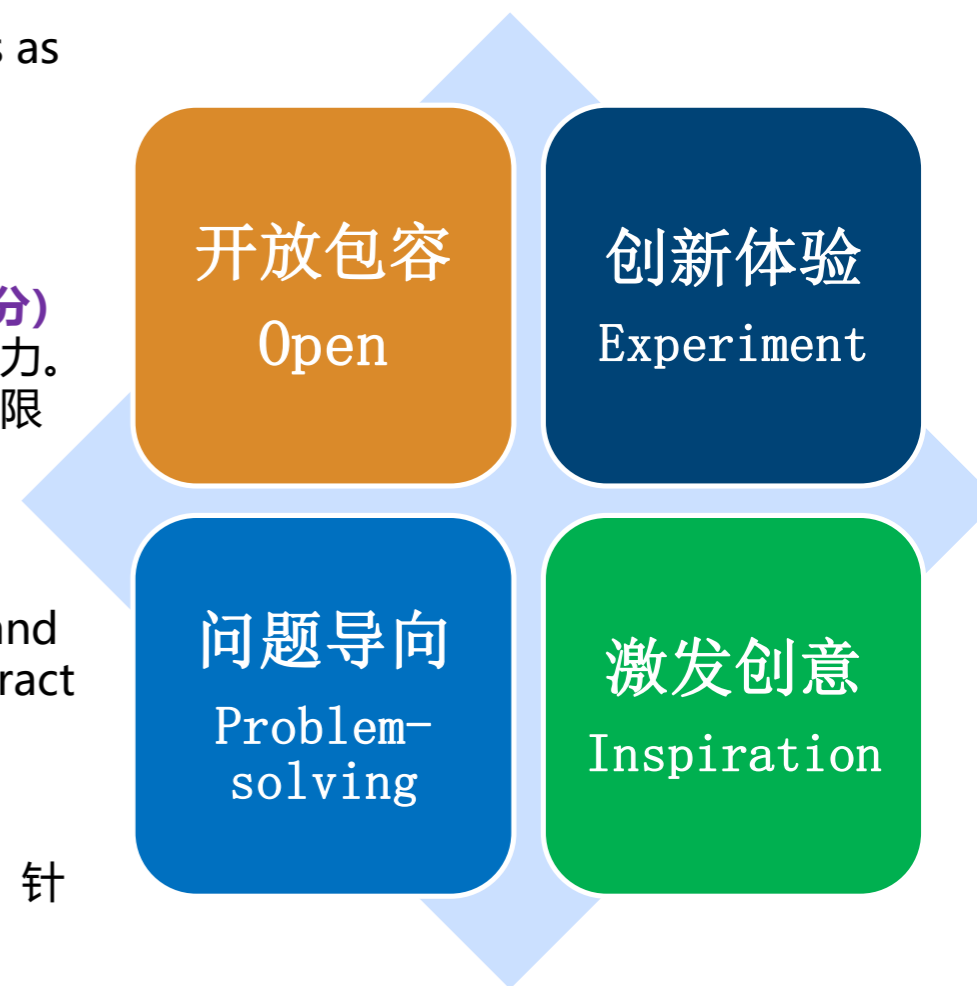
In 2019, Tsinghua x-lab brought the “**Open Geneva**” from Switzerland to Tsinghua University, integrated the 17 sustainable development goals of the United Nations as the theme of challenge, developed and designed it to be “**SDG Open Hack @Tsinghua University**”.

SDG开放创新马拉松挑战赛不仅以大规模赛事活动的方式，而且以**创新创业实践课（1学分）**的方式进行建设，致力于培养学生的领导力、创造力、行动力、国际胜任力和团队协作能力。活动设计不同主题分赛场，吸引学生创新挑战者参加。无院校限制、无院系限制、无专业限制、无年级限制。

The SDG Open Hack is not only designed to be a large scale event, but also a **practical courses on innovation and entrepreneurship (1 credit)**, committed to cultivating students' leadership, creativity, mobility, international competence and teamwork ability. The Challenge is designed to different themed sub-tracks to attract **student innovators** with **no restrictions on university, school, major or grade**.

学生可以根据兴趣自由选择挑战主题，现场组成**跨学科创新团队（Innovation Team）**，针对某个领域与可持续发展相关的问题（**Challenge**），在**24小时内**努力进行**解决方案（Innovative Solution）**的开发，并在最后面对评委和公众进行方案展示。

Students can freely choose challenge topics according to their interests, form an **interdisciplinary innovation team** on site, and work hard to **develop innovative solutions within 24 hours** for challenges related to a certain field. At the end, the solutions would be presented to the judges and the public.



# 2020年赛事组织体系 *Co-organizers 2020*

2020第二届清华大学SDG开放创新马拉松挑战赛赛事及课程全面升级，成为校级大规模赛课结合、科教融合与国际化开放创新的学习实践活动。

The 2nd Tsinghua University SDG Open Innovation Hackathon Challenge 2020 has been fully upgraded on courses, and has become a school-level large-scale competition, integration of science and education, and international open innovation.

**指导单位**  
Directed by



**主办方**  
Organized by



**国际合作伙伴**  
International Partners



**企业合作伙伴**  
Corporate Partners





# 赛事筹备工作 (9-11月) Implementation (Sept-Nov.)



9月1日, 2020SDG启动会  
Kick-off Meeting, Sept. 1



10月29日, 深圳老师备课会  
Shenzhen Faculty Meeting, Oct. 29



11月24日, 分赛场Manager工作会议  
Manager Meeting, Nov. 24



9月25日, 院系老师交流会  
Faculty Orientation Meeting, Sept. 25



11月18日, 主讲老师备课会  
Faculty Course Meeting, Nov. 18



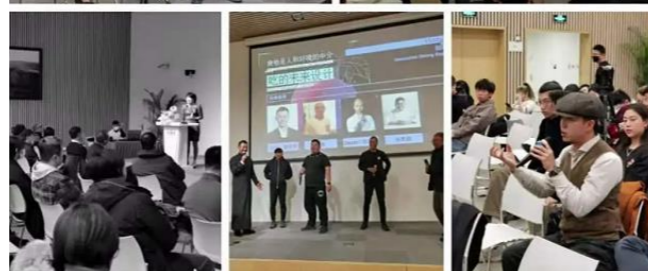
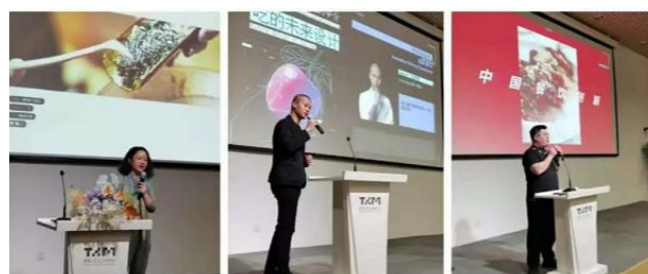
11月26日, 主讲老师备课会  
Faculty Course Meeting, Nov. 26



### 部分赛场研习月主题

Theme of lectures sub-track offered in study month

- 社会创新设计 Social innovation design
- 信息安全的前世、今生和未来 The past, present and future of information security
- 工业生产VS文化在地 Industrial production vs. local culture
- 节约与节食 Save food and diet
- 食物的时空 Food time and space
- 中餐的创新体验 Innovative experience of Chinese food
- 应对气候变化的情节能源转型与创新 Response to climate change, energy transition and innovation
- 如何用SDG思维思考? How to think under SDGs?
- 重塑教育共建未来: 挑战、思考与行动 Reshaping Education and Building the Future: Challenges, Thinking and Actions
- 太空艺术 Space art





# 分赛场承办院系

## *Sub-track hosting Department & Schools*



1. 国际合作赛场-智慧城市 International Special-Smart Cities: 帝国理工学院 Enterprise Lab、清华x-lab (主讲老师: 李纪珍)
2. 国际合作赛场-老龄化和健康福祉 International Special – Aging & Disabilities : 日内瓦大学Solution Space、清华x-lab、清华大学学生全球胜任力发展指导中心 (主讲老师: Steven White)
3. 经管学院 School of Economics and Management (主讲老师: 高建)
4. 美术学院 Academy of Arts & Design、清控人居 (主讲老师: 涂山)
5. 环境学院 School of Environment (主讲老师: 刘建国)
6. 新闻与传播学院 School of Journalism and Communication (主讲老师: 张莉)
7. 电机系 Department of Electrical Engineering (主讲老师: 钟海旺)
8. 电子系 Department of Electronic Engineering (主讲老师: 乔飞)
9. 社会科学学院 School of Social Sciences (主讲老师: 曲炜)
10. 航天航空学院 School of Aerospace Engineering (主讲老师: 徐芦平)
11. 清华大学 iCenter (主讲老师: 林蔚然、彭世广)
12. 计算机系 Department of Computer Science and Technology (主讲老师: 刘知远, 美团合作)
13. 美术学院 Academy of Arts & Design (主讲老师: 师丹青)
14. 深圳国际研究生院-生命科学 Tsinghua Shenzhen International Graduate School-Life Sciences (主讲老师: 马岚)
15. 深研院-新材料 Tsinghua Shenzhen International Graduate School-New Material (主讲老师: 吕伟)
16. 深研院-生物医学 Tsinghua Shenzhen International Graduate School-Biomedical Science (主讲老师: 吴剑)
17. 深研院-化学生物 Tsinghua Shenzhen International Graduate School-Chemical Biology (主讲老师: 谭英)
18. 深研院-先进制造 Tsinghua Shenzhen International Graduate School-Advanced Manufacturing (主讲老师: 李星辉)
19. 深研院-信息+设计 Tsinghua Shenzhen International Graduate School-Information & Design (主讲老师: 聂晓梅, 杨文明)
20. 美术学院 Academy of Arts & Design (主讲老师: 蒋红斌)

# 2020活动规模

Event Scale 2020 --- Nov. 28-29



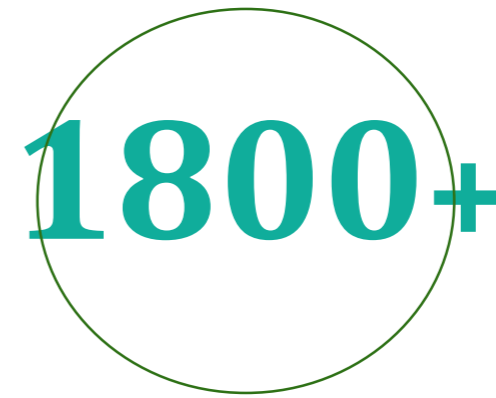
20场SDG讲座  
20SDG Seminars



2 国际合作训练营  
2 Int'l Boot Camps



20场马拉松  
20hackathons



超过1800位参加者  
1800+ Participants



超过300个项目  
300+Projects



24小时  
24hours



决赛及颁奖仪式  
Public Final & Award  
Ceremony



一场高校研讨会  
Education Seminar

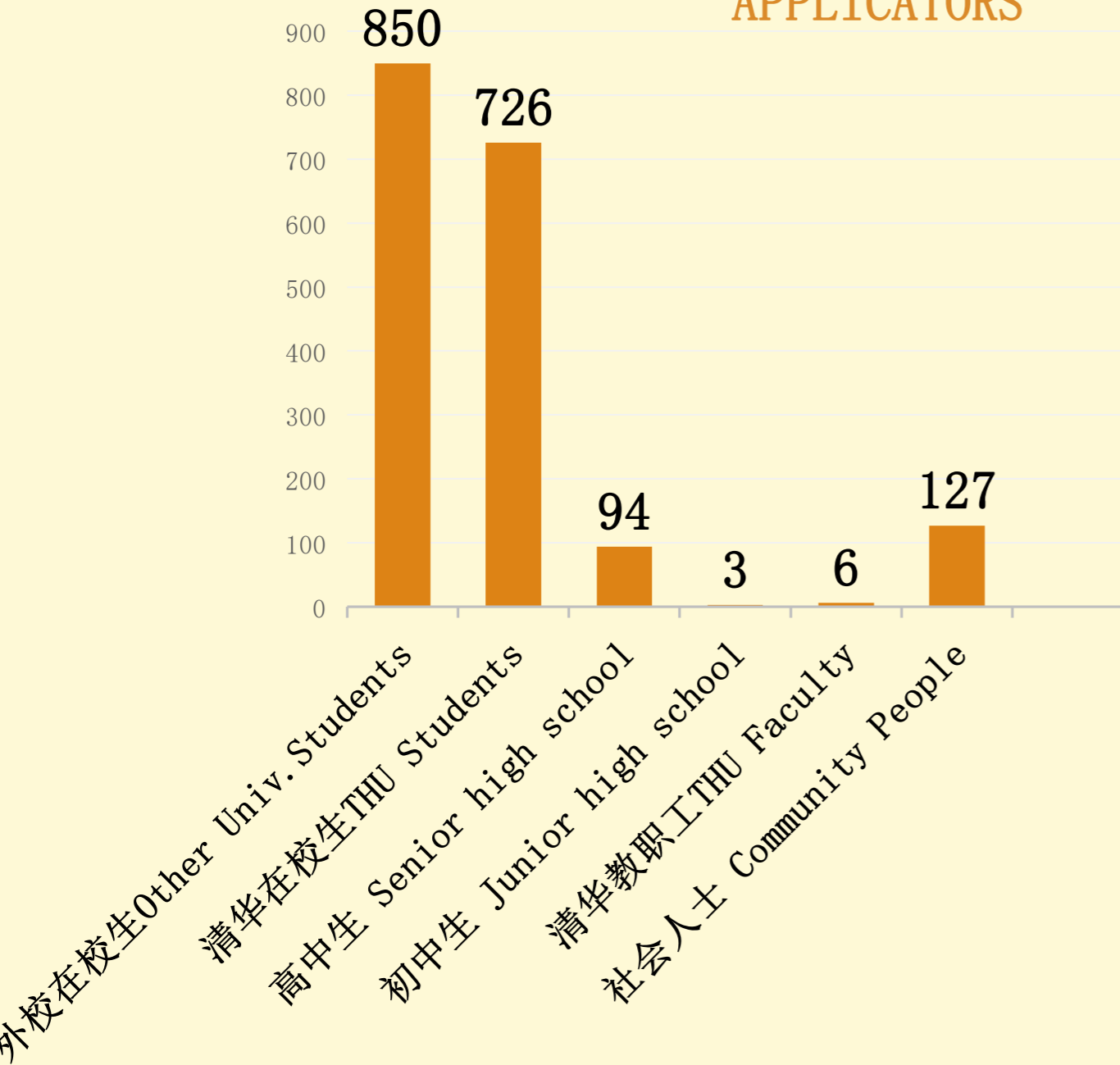


# 报名者数据, 1806报名者

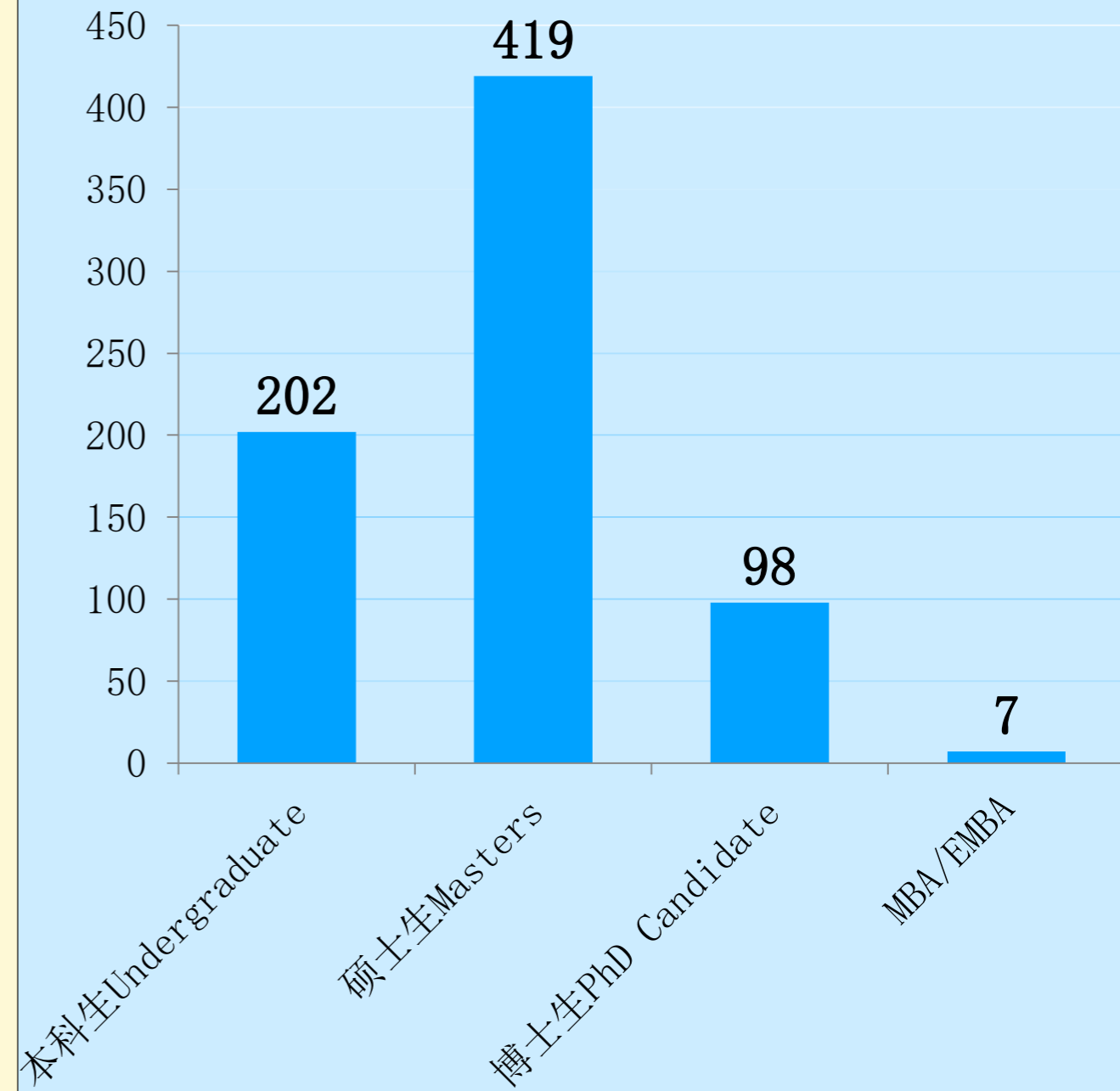
## Application Profile, 1806



### 报名者构成 APPLICATORS



### 清华在校生构成 THU Students



### 报名学生中男生多还是女生多？都是什么年龄的人？

男生**806**人(**45%**)，女生**1000**人(**55%**)，年龄跨度从**15**岁到**50**岁。

### 有多少人参加过第一届SDG Open Hack？

共有**108**人参加过第一届SDG Open Hack (**20%**)

### 报名者都来自哪些国家或地区？

报名者来自**32**个国家和地区

**1660**人来自中国内地，**49**人来自中国港澳台地区

**97**人来自其他国家或地区，包括美国，加拿大，法国，英国，日本、韩国、奥地利，澳大利亚，新西兰，芬兰、瑞士、瑞典、埃及、印度、缅甸、印度尼西亚、菲律宾、巴基斯坦.....

### Among the applicants, are there more male or female?

**806** male (**45%**) and **1,000** female (**55%**) 。 The age span ranges from **15** to **50**.

### How many people have participated in the last year' s SDG Open Hack?

**108** people participated in the last year' s SDG Open Hack (**20%**)

### Which countries or regions do the applicants come from?

Applicants are from **32** countries and regions. **1660** applicants are from mainland China, **49** applicants are from Hong Kong, Macao and Taiwan. **97** people came from other countries or regions, including the United States, Canada, France, the United Kingdom, Japan, South Korea, Austria, Australia, New Zealand, Finland, Switzerland、Sweden, Egypt, India, Myanmar, Indonesia, the Philippines, Pakistan...



### 报名者来自哪些学校?

1806名报名者来自**200**多所高校，其中国内高校**160**多所，国外高校**50**多所。包括清华大学、北京大学、人民大学、中国传媒大学、北京外国语大学、中央财经大学、北京服装学院、武汉大学、上海交通大学、复旦大学、浙江大学、山东大学、中山大学、哈尔滨工业大学、台湾大学、香港大学、帝国理工学院、剑桥大学、京都大学、密歇根大学、诺丁汉大学、伦敦艺术大学、巴黎政治学院、新加坡南洋理工大学、伯明翰大学等。

1806 applicants are from **200+** universities, including **160+** domestic universities and **50+** foreign universities, such as Tsinghua University, Peking University, Renmin University of China, Communication University of China, Beijing University of Foreign Studies, Central University of Finance and Economics, and Beijing Institute of Fashion Technology, Wuhan University, Shanghai Jiaotong University, Fudan University, Zhejiang University, Shandong University, Sun Yat-sen University, Harbin Institute of Technology, National Taiwan University, University of Hong Kong, Imperial College London, University of Cambridge, Kyoto University, University of Michigan, University of Nottingham, University of the Arts London, Paris Institute of Political Studies, Nanyang Technological University, Birmingham University, etc.

### 实际有多少人参赛? 产生多少个团队?

1806名报名者中，共有**931**人参赛，占比**52%**。其中**413**人线下参加，**518**人线上参加。共产生**187**个团队。

Among 1806 applicants, **931** take part in the competition, accounting for 52%. Among them, 413 people participate offline and 518 participate online. A total of **187** teams are generated.

# 活动特色

## *Features of SDG Open Hackathon*



SDG价值观塑造  
SDG Value-driven

赛课结合  
Course + Competition

学科交叉  
Cross-discipline

科教融合  
Research to Education

挑战性学习  
Learning with Challenge

同伴分享  
Peer-sharing

开放创新  
Open Innovation

校企合作  
University-Corporation  
Partnership

国际合作  
International  
Cooperation

线上线下融合  
Onsite and online



**未来，我们将提供支持，让SDG开放创新马拉松落户更多高校、企业和地区**  
*To Launch SDG Open Hack, Supports to universities, corporations and regions*



- ▶ 课程大纲、学术手册及运营手册 Syllabus, Teaching Handbook & Operation Manual
- ▶ 课程技术平台、赛前赛后问卷 Technical Platform, pre & post-Hack surveys
- ▶ 师资备课及运营培训 Training faculty and operation team
- ▶ 活动设计及导师邀请 Support on event design and mentors invitation
- ▶ 学生团队活动运营 Support on students core teams & operation
- ▶ 活动物料设计（宣传品、学生T恤、奖品等） Promotion materials design (Marketing materials, T-shirts, prizes etc.)
- ▶ UNITAR荣誉证书 Certificates by UNITAR

# 分赛场主讲老师

## Hack Leaders



Hack1  
经管学院 李纪珍



Hack1  
清华x-lab 杜霞



Hack2  
经管学院 Steven White



Hack3  
经管学院 高建



Hack4  
美术学院 涂山



Hack5  
环境学院 刘建国



Hack6  
新闻与传播学院 张莉



Hack7  
电机系 钟海旺



Hack8  
电子系 乔飞



Hack9  
社科学院 曲炜



Hack10  
航天航空学院 徐芦平



Hack11  
清华IC enter 林蔚然



Hack11  
清华iCenter 彭世广



Hack12  
计算机系 刘知远



Hack13  
美术学院 师丹青



Hack14  
深圳国际研究生院 马岚



Hack15  
深圳国际研究生院 吕伟



Hack16  
深圳国际研究生院 吴剑



Hack17  
深圳国际研究生院 谭英



Hack18  
深圳国际研究生院 李星辉



Hack19  
深圳国际研究生院 聂晓梅



Hack19  
深圳国际研究生院 杨文明



Hack20  
美术学院 蒋红斌



# 部分导师

*Part of Mentors*





# 学生主管团队&清华x-lab组织者

## Hack Managers & Tsinghua x-lab Organizing Team



Hack	Hack Manager	宣传组	后勤组	外联组
Hack1	赖致远	俞晨欣		刘一珩
Hack2	吴海铭			
Hack3	龙佳雨	冯雨霏	程润泽	
Hack4	田旭冬	孙丽媛	王峥杰	梁成思
Hack5	刘琴	王涵	何吉轩	徐思远
Hack6	孙诗	岳颖	郭文青	崔杨臻
Hack7	杨光照	冯琪凡	赵雪健	王宇瑄
Hack8	胡修远	肖振宇	梁辰宇 张米	安夏 魏舒琪
Hack9	董靖	王泽坤	邱梓航	王新璐 高索芬
Hack10	韩思雨			
Hack11	梁宏军	唐琦	朱周	高飞
Hack12	周界			
Hack13	赵沐恩	洪昀	马菡璐	
Hack14	石铭、姜子义	周文萌	刘励	崔杰
Hack15	韩志远			
Hack16	张亚丹			
Hack17	李季			
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**感谢所有辛勤付出的老师、导师、同学和合作伙伴!**  
**Thank you so much for your efforts and participation**  
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