



## 1 改革开放40周年经济领域取得伟大成就

### 伟大成就

高度集中的计划经济向充满活力的市场经济的转变

封闭、半封闭经济向全方位开放型经济的转变

经济弱国向经济大国的转变（国家实力和国际影响力得到历史性提升、中国从低收入国家迈入中等收入国家行列）

### 改革开放40年：1978-2018

#### 从计划经济向社会主义市场经济的转变

经过40年的改革开放，中国成功实现了从高度集中的计划经济体制向充满活力的社会主义市场经济体制的伟大历史转变，市场经济的地位和观念在中国牢牢树立。

## 改革开放40年：1978-2018

### 封闭、半封闭经济向全方位开放型经济的转变

中国目前是世界经济的重要组成部分。是世界上开放程度最高的国家之一。中国经济深深的融入到世界经济之中，在世界经济中发挥着重要的作用。

## 改革开放40年：1978-2018

### 从经济弱国向经济大国的转变

改革开放以来40年，中国的经济实力和综合国力显著增强。在改革开放的40年间，国民经济保持高速增长，经济总量连上新台阶，国家从一个低收入国家迈入中等偏上收入国家行列。

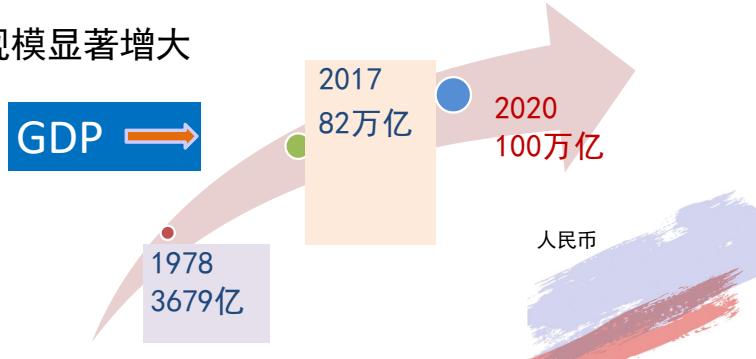
## 经济持续快速增长

- 2017年中国国内总产值，按照不变价计算比1978年增长33.5倍，年均增长9.5%。
- 同期，中国经济年均增速 VS 世界经济年均增速 9.5% VS 2.9%



## 经济总量连上新台阶

### 规模显著增大



## 经济实力大幅跃升

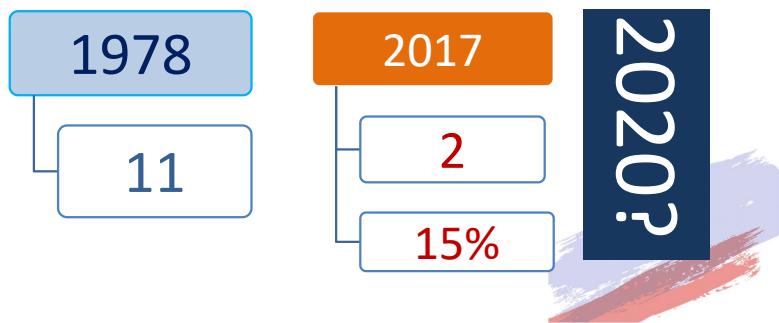
### GDP

- 2020年突破100万亿元

### 粮食产量

- 2020年13390亿斤
- 连续6年超1.3万亿斤

## 经济规模跃居世界第二位



## 从低收入国家迈入中等收入偏上国家行列



### 中国改革开放40年---经济发展战略



世界500强：40年前，中国没有一家私营企业，一家都没有，全部都是国营企业，也没有世界五百强。今天呢，2017年世界五百强中我们的企业数量已经达到了115家，其中有超过25家是我们的民营企业。



## 总结成就

- 1 • 计划经济向市场经济的转变
- 2 • 封闭、半封闭经济向全方位经济的转变
- 3 • 经济弱国向经济大国的转变（国家实力和国际影响力得到历史性提升、中国从低收入国家迈入中等收入国家行列）



中国高铁—轨道交通的一张亮丽名片

## 改革开放40年发展历程（如何发展？）

1978-1984  
打开大门

1984-1991  
改革进行时

1992-2002  
初见成果

2003-2018  
新常态

## 2 改革开放40年发展历程

- 1978-1984 经济改革大幕徐徐拉开，开启改革这一伟大的历史变革
- 1984-1991 改革进行时，经济改革全面展开
- 1992-2002 初见成果，市场经济体制建立
- 2003-2018 新常态

### 2.1 1978-1984 经济改革的开启

#### 伟大的历史转折

—— 1978年12月中国共产党十一届三中全会确定了工作重点的转移

#### 改革开放的起步

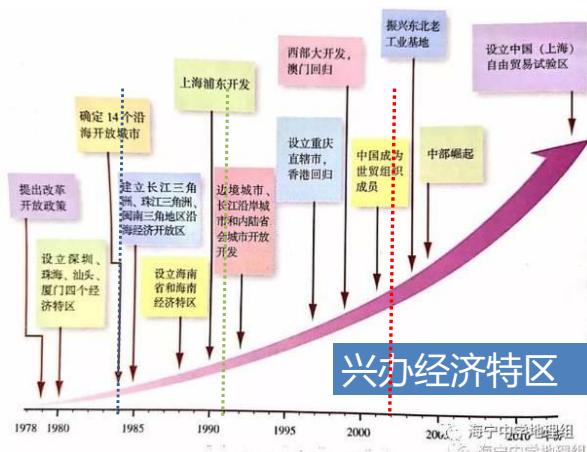
—— 1978年12月中国共产党十一届三中全会标志着改革开放和经济改革的开启

#### 关键词：中国共产党全国代表大会

- 中国共产党第十一届全国代表大会三中全会 (1978.12)
- 中国共产党第十二届全国代表大会三中全会 (1984.10)
- 中国共产党第十三届全国代表大会 (1987.10)
- 中国共产党第十四届全国代表大会 (1992.10)
- 中国共产党第十六届全国代表大会 (2002.11)
- 中国共产党第十八届全国代表大会 (2012.11)

#### 目标探索

- 首先从农村开始，逐步向城市推进
- 试点先行、经验积累、逐步推广
- 城市经济体制改革初步展开（侧重扩大企业自主权、增强企业活力、执行按劳分配等原则）
- 对外开放从特区开始（深圳、珠海、汕头、厦门）



## 总结

- 第一阶段为中国经济体制改革的初步探索阶段。在这一阶段，改革的重心是农村改革，以解放生产力。既取得成果，又存在问题。
- 以深圳、中外合资等为试点，对外开放先行先试，取得斐然成果。

## 2.2 改革开放第二阶段：1984-1991

# 改革进行时，中国的 改革开放全面展开

## 1984-1991 经济改革的全面展开

### 经济体制改革纲领：

中国共产党十二届三中全会通过《中共中央关于经济体制改革的决定》。

决定全面系统地提出了经济体制改革的方向、性质、任务和基本目标，成为指导中国经济体制改革的纲领性文件。

## 2.2 1984-1991 经济改革的全面展开

- “**三步走**”发展战略
  - 以**城市**为重点推进经济体制改革
  - 经济改革在体制摩擦中曲折前进
- 这一时期的主要工作**

## 1984-1991 经济改革的全面展开

### “十三大”制定的三步走发展战略：

第一步：到20世纪80年代末，实现国民生产总值比1980年翻一番，解决人民的温饱问题。√

第二步：到2000年，国民生产总值再增长一倍，人民生活达到小康水平。（7100亿元，2.8万亿元）√

第三步：到21世纪中叶，人均国民总值达到中等发达国家水平，人民**比较富裕**，基本实现现代化。

## 1984-1991 经济改革的全面展开

### 以**城市**为重点推进经济体制改革

- 改革重心的转移（从农村到城市。农村改革推动城市改革。温州）
- 企业改革全面展开（扩大厂矿企业自主权、扩权让利和经济责任制实行、利改税、企业法出台等等）
- 多种经济成分并存发展（公有、集体、个体、私营、外资）
- 对外开放格局初步形成（对外开放逐步由沿海地区向内地推进，上海浦东开放）

## 1984-1991 经济改革的全面展开

### 改革在体制摩擦中曲折前进

- 财税、金融和投资体制改革
- 价格改革闯关（放开绝大多数农产品购销价格、放开计划外生产资料价格、放开消费品价格、工资改革）
- 治理整顿的实施（通货膨胀、经济结构不合理、经济秩序混乱）

## 对外开放更加扩大

在全面推动城乡和企业改革的同时，对外开放逐步由沿海地区向内陆推动，对外经济技术交流规模和水平大幅提升，对外开放地区不断扩大。由点到面，逐步开放

一个重大举措：开放上海浦东

## 复习上节重点

关键词：改革开放

时间段：1978-2018 还在进行

取得成就：三个转变

如何做：四个阶段（初始、全面、市场经济体制、新常态）

## 2.3 第三个阶段：1992-2002

### 初见成果：社会主义市场经济体制建立

## 2.3 1992-2002 社会主义市场经济体制的建立

- 确立经济体制改革的目标
- 在机遇和挑战中推进经济改革和发展
- 初步建立社会主义市场经济体制

## 1992-2002 社会主义市场经济体制的建立

目标和基本框架的确立

- 邓小平南巡讲话（阐述了建立社会主义市场经济理论的基本原则）
- 1992年10月召开的中国共产党的十四大（一个重要会议）

## 中国共产党十四大报告

十四大报告正式确定中国经济体制改革方向是建立社会主义市场经济体制。

### 三项重大决策

- 抓住机遇，加快发展，集中精力把经济搞上去
- 明确中国经济体制改革目标是建立社会主义市场经济体制
- 确立邓小平建设有中国特色社会主义理论的指导地位

## 1992-2002 社会主义市场经济体制的建立

### 在机遇和挑战中推进经济改革和发展

- 经济过热与软着陆（宏观调控）
- “八五”计划的完成和经济发展重大战略的实施
- 稳定经济增长与应对亚洲金融危机（1997）
- 加入世贸组织与对外开放新格局（2001.11）
- “九五”计划的完成和小康目标总体实现

## 建立社会主义市场经济体制纲领



- 确定了市场在国家宏观调控下对资源配置的基础性作用
- 确定了经济发展方针：公有制为主体、多种经济成分共同发展
- 企业经营机制转换、建立现代企业制度
- 建立统一开放的市场体系
- 转变政府管理职能、建立以按劳分配为主体、效率优先、兼顾公平的收入分配制度等

1993年十四届三中全会做出了《关于建立社会主义市场经济体制若干问题的决定》

## 对外开放全面展开

1. 对外开放城市已经遍布全国所有省区
2. 自2001年11月中国成功加入世界贸易组织（WTO）。中国经济进一步融入经济全球化进程，获得了更为广阔的发展空间；同时也为世界经济发展注入了强大的动力。

## 1992-2002 社会主义市场经济体制的建立

### 2002年，中国初步建立社会主义市场经济体制

## 2002年

- 中国经济体制改革取得了历史性进展。以公有制为主体、多种所有制经济共同发展的格局基本形成
- 基本实现了从计划指令向主要运用经济手段、法律手段、和必要的行政手段的转变
- 商品市场、金融市场和劳动力市场等现代化市场体系和核心市场初步形成
- 社会保障体系初步建立

社会主义市场经济体制初步建立

## 中共十六大会议-2002.11

目标：全面建设小康社会

道路：坚持以经济建设为中心，不断解放和发展社会生产力

任务：完善社会主义市场经济体制，推动经济结构战略性调整，基本实现工业化，大力推进信息化，加快建设现代化，不断提高人民生活水平



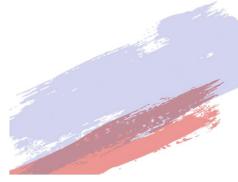
目标确立



部署实施

## 中共十七大会议

2007年10月，十七大召开。对实现全面建设小康社会的宏伟目标作出全面部署，提出更高要求。对经济发展明确提出：努力实现经济又好又快发展。



## 2002-2012 社会主义市场经济体制完善

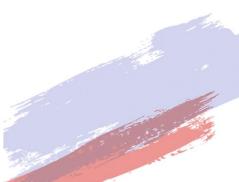
- 民生转向（全面建设小康社会、转变经济发展模式）
- 经济体制的完善（坚持和完善公有制为主体、多种所有制经济共同发展）
- 发展实现新跨越（统筹城乡区域协调发展、走出去和引进来、转型发展、十二五规划制定）



## 2002-2012 社会主义市场经济体制完善

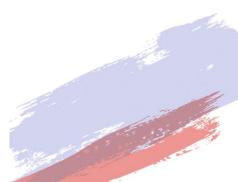
经济发展实现新跨越

- 实力大幅提升（农业综合生产力水平显著提高、工业经济影响力大幅提升、基础设施和基础产业实现新飞跃、经济总量跃居世界第二位）
- 人民生活水平显著提高



## 2002-2018 新常态

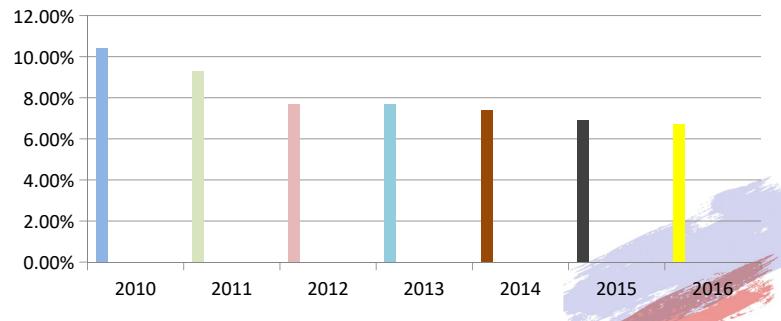
- 2002-2012 社会主义市场经济体制完善
- 2012-2018 新常态



## 新常态：2012-2018？

- 后危机时代全球经济新特征，其经济含义主要是指无就业增长的经济复苏
- 中国经济增速放缓
- 中国经济发展不平衡、不协调、不可持续、部分产业供过于求，产能过剩

2010 – 2016 中国国内生产总值增长速度一览图



## 中国经济发展新常态

中国经济进入了新的发展阶段，正在进行深刻的方式转变和结构调整。

新？（经济从高速增长转为中高速增长；经济结构不断优化升级，第三产业、消费需求渐成主体；要素驱动和投资驱动转为创新驱动）

## 2012 -2018 新常态

- 全面深化改革
- 以新理念引领新发展
- 未来之路：经济改革发展的光明前景

## 2012年11月：中共“十八大”

2012年11月，中国共产党召开了第十八届全国代表大会。这次会议确立了全面建设小康社会和全面深化改革开放的目标。提出了努力实现的新要求：经济持续健康发展，人民民主不断扩大，文化软实力显著增强，人民生活水平全面提高。经济要健康发展，经济发展方式要取得重大转变。2015年10月，中国共产党第十八届全国代表大会五中全会召开。这次会议提出了“创新发展、协调发展、绿色发展、开放发展、共享发展”的五大发展理念。

## 新理念引领新发展

新的发展理念提出

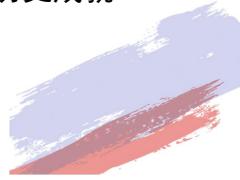
- ✓ 创新发展
- ✓ 协调发展
- ✓ 绿色发展
- ✓ 开放发展
- ✓ 共享发展





## 问题

1. 中国改革开放四十年从什么时候开始？什么时候结束？
2. 中国改革开放四十年的发展历程是什么？
3. 改革开放四十年第二个阶段的三步走战略是什么？
4. 简要概述中国改革开放四十年取得的历史成就
5. 简述你对中国改革开放四十年的看法





## 打赢脱贫攻坚战

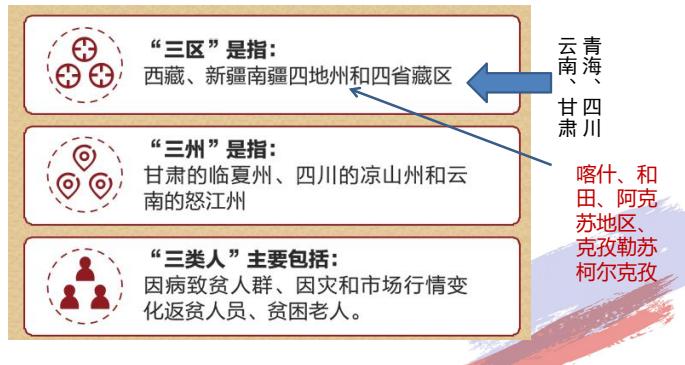


### 他们为什么还没有摆脱贫困？？

改革开放这么多年了，中国为什么还有贫困地区和贫困人口呢？是他们懒惰、不够聪明吗？

- 1 集革命老区、民族地区、边疆地区于一体。自然地理、经济社会、民族宗教、国防安全等问题交织在一起，加大了脱贫攻坚的复杂性和难度。
- 2 基础设施和社会事业发展滞后。自然灾害多发，地理位置偏远，地广人稀，资源贫乏。
- 3 社会发育滞后，社会文明程度低。长期封闭，同外界脱节。家族宗教势力影响大，不少贫困群众沿袭陈规陋习。
- 4 生态环境脆弱，自然灾害频发。地质灾害频发，十年一大灾、五年一中灾、年年有小灾。
- 5 经济发展滞后，人穷村也穷。产业欠基础、少条件、没项目，抗风险能力不足。

### 改革开放40年里中国什么地方、什么人最贫困？



### 截至2015年年底，中国贫困数据统计

- 832个贫困县
- 5630万建档立卡贫困人口
- 12.8万个建档立卡贫困村

特点：

- 贫困程度高
- 减贫成本高
- 脱贫难度大

贫困问题依然是社会发展的短板

必须解决

解决贫困问题已有坚实的物质基础

政治保证  
制度保障  
万众一心

条件具备

# “十三五”脱贫攻坚计划背景

- 贫困是经济发展的最突出“短板”
- 国家综合实力的增强，为打赢脱贫攻坚战奠定了坚实的物质基础
- 国家为脱贫攻坚提供了坚强的政治保证和制度保障
- 社会各界就脱贫攻坚形成了强大合力



## 脱贫目标



## 划重点

贫困地区农民人均可支配收入比2010年翻一番以上，增长幅度高于全国平均水平

农村贫困人口实现脱贫、贫困县全部摘帽、区域性整体贫困得到解决。



## 划重点

一超过：贫困人口年人均收入稳定超过国家扶贫标准

两不愁：扶贫对象不愁吃、不愁穿

三保障：义务教育有保障、基本医疗有保障、住房安全有保障

## 脱贫目标

### 具体目标

2020年全面建成小康社会

现行标准下农村建档立卡贫困人口实现脱贫  
(5630万人  
-2015年底)  
√

贫困县全部摘帽  
(832个)  
√ √

解决区域性整体贫困  
√ √ √

# 脱贫攻坚目标实现了吗？

2021年2月，中国向世界庄严宣告：

中国脱贫攻坚取得全面胜利，现行标准下9899万（2012）贫困人口全部脱贫，832个贫困县全部摘帽，12.8万个贫困村全部出列，区域性整体贫困得到解决，完成了消除绝对贫困的艰巨任务。

## 怎么做？

➤ 工作原则是什么？

指导思想

➤ 工作机制是什么？

保障措施

实施

## 怎么做？工作原则

- 精准扶贫、精准脱贫（解决扶谁、脱谁）
- 坚持全面落实主体责任（解决谁来做）
- 坚持统筹推进改革创新（解决局部与全体）
- 坚持绿色发展（解决可持续的问题）
- 坚持激发群众内生动力、活力（解决积极性的问题）

## 怎么做？保障措施

建立健全脱贫攻坚工作机制，是保障脱贫攻坚工作有效开展的有力措施，是打赢脱贫攻坚战的重要举措。

## 怎么做？保障措施

- ✓ 精准扶贫脱贫机制
- ✓ 扶贫资源动员机制
- ✓ 贫困人口动员机制
- ✓ 资金项目管理机制
- ✓ 考核问责激励机制

保障措施

## 保障措施一：精准扶贫脱贫机制

- 扶持谁？
- 谁来扶？
- 怎样扶？
- 如何退？

精准

## 扶持谁？

精确识别建档立卡解决“扶持谁”的问题



## 谁来扶？



驻村工作、帮扶到户

## 怎样扶？

### 对症下药、因地制宜、分类施策

根据各个贫困地区不同的情况，采取不同的脱贫攻坚途径，帮助贫困地区、贫困人员脱贫致富。

**关键词：实事求是**

## 如何退？

### 衡量标准

- 户年人均收入稳定超过国家扶贫标准
- 吃穿不愁
- 义务教育、基本医疗、住房安全有保障

## 保障措施二：扶贫动员机制

- 动员上体现广泛性
- 模式上突出多样性
- 推进上强调协调性

## 保障措施三：贫困人口参与机制

- 帮扶方式转变（输血到造血）
- 突出一个精准
- 凸显贫困人员的主体地位
- “扶志、扶智”
- 产业先行

## 保障措施四：资金管理体制

管好钱

- 推进涉农资金统筹整合
- 优化涉农资金供给机制
- 下放资金项目审批权限
- 强化资金项目监督管理
- 建立健全信息公开

## 保障措施五：考核问责激励机制

管好人、  
用好人

- 建立健全考核评估机制
- 建立健全督查巡查机制
- 建立健全监督投诉机制
- 建立健全责任追究机制
- 建立健全表彰奖励机制

具体怎么做？



工作原则



具体方法

实施途径



## 思考题

1. 中国脱贫目标是什么？
2. 截止2020年底，中国有多少个贫困县实现全部摘帽？
3. 产业发展脱贫都有哪些方法？
4. 中国成功脱贫的经验是什么？
5. 中国脱贫攻坚取得哪些成就？



## 同学们眼中的“中国标签” the CHINESE “TAG” in your eyes



喜欢红色?  
Like red color?



 Traditional clothing?



Sports?



Sports?



## 时代的发展

### 姓名 NAME

- 姓在前 名在后
- (当代) 结婚之后不改姓
- 姓氏少。中国有14亿人口，姓氏只有4000多个。
- Compared: US more than 1 million, Japan 120 thousand.
- In China, nearly 1 billion people center upon 100 surnames

淘宝网 Taobao.com  
淘宝商城 mall.taobao.com

天猫 TMALL.COM

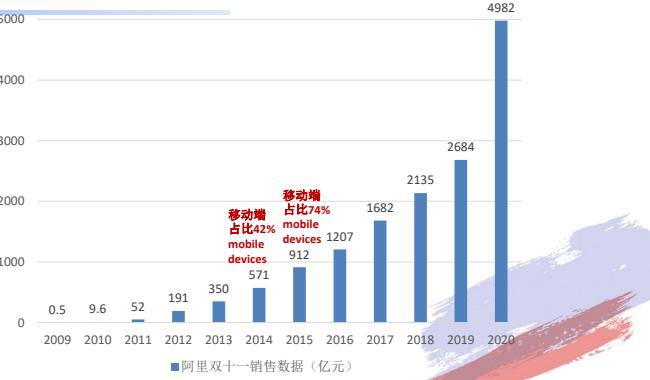
阿里巴巴 Alibaba.com

淘宝 支付宝 ALIPAY

双十一?

"Double-eleven" online shopping event  
(Black Friday)(Cyber Monday)

## 时代的发展



WhatsApp



WeChat



Line

# 计划经济 Planned economy? 市场经济 Market economy?



We are Market Economy, but we do have plan.

## Year 2024

2024年是实现“十四五”规划目标任务的关键一年。

The key year of the "14th Five-Year Plan"

### 全面建成小康社会

built a moderately prosperous society in all respects

### 中国教育现代化2035

China's Education Modernization 2035 plan

# 同学们眼中的“中国” the CHINA in your eyes

理解中国发展				跨文化沟通	文化差异探索	融合实践案例	
深入学习中国发展历程，洞察东西方文化异同。	提升跨文化交际技巧，促进国际理解与合作。	探索东西方价值观、社会行为的区别。	研究文化融合实例，启发创新思维与应用。				
<b>01 中国文明史</b> 中国在五千年的悠久历史中，儒家思想贯穿始终，强调道德伦理与社会秩序。	<b>02 西方文明起源</b> 西方文明源于古希腊、罗马，深受基督教影响，重视个人自由与民主法治。	<b>03 文化主导思想</b> 中国以儒家思想为核心，西方则强调个人主义与理性思考，形成鲜明对比。	<b>04 文化根基对比</b> 中国重家庭与和谐，西方倡独立与竞争，根源差异塑造不同社会行为模式。				
<b>仁爱与礼义</b> 儒家倡导仁爱，主张爱人如己，强调礼仪规范，维护社会秩序。	<b>中庸之道</b> 追求平衡与和谐，避免极端，体现智慧与道德修养。	<b>经典著作</b> 《论语》、《孟子》等，记录孔子及其弟子言行，阐释儒家思想精髓。	<b>教育与治国</b> 重视教育，提倡学而优则仕，强调德治与法治并重，构建理想社会。				
<b>实证主义原则</b> 西方文化强调观察与实验，通过具体证据验证理论，推动科学发展。	<b>逻辑推理的应用</b> 逻辑是西方思维的基础，用于构建严密论证，促进理性决策与创新思考。	<b>批判性思维培养</b> 鼓励质疑与反思，批判性思维被视为个人成长与社会进步的关键。	<b>实验科学的发展</b> 从伽利略到牛顿，实验方法成为探索自然规律的核心，奠定现代科学基础。				

## 传统节日与习俗

01 春节：辞旧迎新	02 中秋：月圆人团圆	03 端午：纪念屈原
春节，中国最重要的传统节日，家家户户贴春联、放鞭炮，吃团圆饭，寓意辞旧迎新，祈福来年平安吉祥。	中秋节，赏月、吃月饼，象征着家人团聚，表达对远方亲人的思念之情，体现了中国人重视家庭和睦的传统美德。	端午节，赛龙舟、吃粽子，纪念爱国诗人屈原，弘扬忠诚与勇气的精神，展现中华民族的历史记忆与文化传承。

Understand China's Development	Intercultural Communication	Explore Cultural Differences	Integrate Practice Cases
In-depth study of China's development and insight into the similarities and differences between Eastern and Western cultures.	Enhance cross-cultural communication skills and promote international understanding and cooperation.	Explore the differences between Eastern and Western values and social behaviors.	Research on the examples of cultural integration to inspire innovative thinking and application.
<b>01 History of Chinese Civilization</b> Throughout China's long history of 5,000 years, Confucianism has always emphasized morality, ethics and social order.	<b>02 Origins of Western Civilization</b> Originating from ancient Greece and Rome, Western civilization is deeply influenced by Christianity and attaches importance to individual freedom and the democratic rule of law.	<b>03 Dominant Cultural Ideology</b> The contrast between China, with Confucianism at its core, and the West, with its emphasis on individualism and rational thinking.	<b>04 Comparison of Cultural Roots</b> Chinese culture emphasizes family and harmony, while the West advocates independence and competition. The differences in cultural roots shape different social behavior patterns.

## 东西方文化的交流

01 全球化背景下的文化交流	02 领域互动：经济·教育·科技	03 挑战与机遇并存
经济全球化与信息技术的迅速发展，促进了东西方文化产品的广泛传播，如电影、音乐和文学作品，加深了全球范围内的文化理解与欣赏。		
<b>政策层面推动</b> 如“一带一路”倡议，促进沿线国家的文化交流与经济合作，加深东西方文化的相互理解与尊重。		
<b>教育体系融合</b> 国际课程设置与跨文化沟通培训，培养学生的全球视野和跨文化交际能力。		
<b>商业媒体融合</b> 跨国广告、品牌营销中融入多元文化元素，电影、音乐、文学作品展现东西方文化的交融之美。		
<b>文化融合案例</b> 中美联合培养项目、跨国公司在华经营策略调整，以及中西合璧的艺术展览，都是文化融合的成功实践。		

## East-West Cultural Exchange

### 01 Cultural exchanges in the context of globalization

Economic globalization and the rapid development of information technology have facilitated the wide dissemination of cultural products from the East and the West, such as films, music and literature, which have deepened cultural understanding and appreciation on a global scale.

### 02 Area of Interaction: Economy • Education • Science and Technology

The East and the West have carried out in-depth interaction in the fields of economy, education, science and technology, such as international trade, cooperation with multinational companies, study abroad programs and scientific research cooperation, demonstrating the complementarity and win-win situation under the cultural differences.

### 03 Challenges and Opportunities

Cultural collisions bring challenges, such as misunderstandings and conflicts, but at the same time they also nurture opportunities for cultural exchange and innovation, and promote the diversity and prosperity of global cultures.

#### Policy-level Promotion

For example, the "Belt and Road" initiative promotes cultural exchanges and economic cooperation among countries along the route, deepening mutual understanding and respect between Eastern and Western cultures.

#### Integration of Educational Systems

International curriculum and cross-cultural communication training to develop students' global perspective and cross-cultural communication skills.

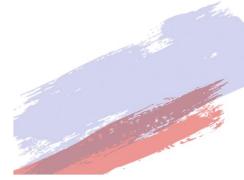
#### Integration of Commercial Media

Multicultural elements are integrated into multinational advertisements and brand marketing, and movies, music and literature show the beauty of the fusion of Eastern and Western cultures.

#### Cases of Cultural Integration

For example, the Sino-US joint training program, the adjustment of multinational corporations' business strategies in China, and art exhibitions combining Chinese and Western cultures are all successful practices of cultural integration.

## WHY did you choose China and choose Beihang? 选择留学中国、留学北航的原因



2020中国大学新生质量排名 (数据来源软科)

排名	学校名称	省市	得分
1	清华大学	北京	100.0
2	北京大学	北京	96.0
3	中国科学院大学	北京	94.7
4	中国科学技术大学	安徽	93.1
5	复旦大学	上海	91.0
6	上海交通大学	上海	90.5
7	中国人民大学	北京	90.0
8	南京大学	江苏	87.9
9	北京航空航天大学	北京	87.5
10	同济大学	上海	87.2
11	南开大学	天津	84.6
12	浙江大学	浙江	84.4
13	上海财经大学	上海	84.4
14	北京师范大学	北京	84.2
15	武汉大学	湖北	83.5
16	对外经济贸易大学	北京	82.9
17	北京理工大学	北京	82.1
18	中央财经大学	北京	81.9
19	天津大学	天津	81.9
20	华中科技大学	湖北	81.7
21	西安交通大学	陕西	81.2
22	东南大学	江苏	80.3

#### 生源:

2021年——北航生源质量再上新台阶  
理科生源整体质量稳居全国第9名  
26个省份理科录取末位名次进入全国前9  
天津、山东、河南、湖北、广西、贵州、云南、青海等8个省份录取末位名次在全国高校排名前8  
In 2021, the quality of students of Beihang University reach a new level  
The overall quality of science students ranks 9th in China



## Schools 学院

## Schools

- 01材料科学与工程学院
- 02电子信息工程学院
- 03自动化科学与电气工程学院
- 04能源与动力工程学院
- 05航空科学与工程学院
- 06计算机学院
- 07机械工程及自动化学院
- 08经济管理学院
- 09数学与系统科学学院
- 10生物与医学工程学院
- 11人文社会科学学院

- 12外国语学院
- 13交通科学与工程学院
- 15宇航学院
- 17仪器与光电科学学院
- 19物理科学与核能工程学院
- 20法学院
- 21软件学院
- 24中法工程师学院
- 25国际学院
- 26新媒体艺术与设计学院
- 27化学学院
- 30空间与环境学院
- 39网络安全学院
- 42集成电路学院

## Schools

School of Materials Science and Engineering	School of Electronics and Information Engineering
School of Automation Science and Electrical Engineering	School of Energy and Power Engineering
School of Aeronautic Science and Engineering	School of Computer Science and Engineering
School of Mechanical Engineering and Automation	School of Economics and Management
School of Mathematical Sciences	School of Biological Science and Medical Engineering
School of Humanities and Social Sciences (School of Public Administration)	School of Foreign Languages
School of Transportation Science and Engineering	School of Reliability and Systems Engineering
Flying College	School of Instrumentation and Optoelectronic Engineering
School of Law	School of Software
School of Future Aerospace Technology / ShenYang Honors College	Sino-French Engineer School
School of New Media Art and Design	School of Chemistry
Institute for Advanced Studies in Humanities and Social Sciences	School of Space and Environment
Research Institute of Aero-Engine	Department of Sports
Beihang School	School of Medical Science and Engineering
School of Integrated Circuit Science and Engineering	School of Cyber Science and Technology
Institute of Artificial Intelligence	Research Institute for Frontier Science

# Student Number

73066202

73086207

# Logo

## 精神文化/Spiritual culture

- 昂扬向上的双箭头（飞行器）——航空航天器的抽象图形  
■ High - pointing twin arrows (aircraft) - abstract figure of an aerospace spacecraft
- 展开的书卷/The open scroll,  
■ 椭圆的卫星轨道以及/Elliptical satellite orbits as well
- 星座闪烁的太空/The constellations gleam in space
- 1952
  - 不仅是北航的建校年代/not only the founding year of Beihang university
  - 更从特殊的历史角度突出了北航人肩负的历史使命/also highlights the mission of Beihang people from a special historical perspective
- 基础色调为科技蓝/
  - 开放、严谨、稳重、进取的内涵/Open, rigorous, prudent, enterprising connotation
  - 志在蓝天、勇于探索——北航人倾注特殊感情的一种色彩/Aiming at the blue sky and daring to explore



## Beihang in the Past Years

## Beihang in the Past Years 三代北航人：初心与使命



### 诞生：国家建设之时，第一代北航人

1952年，周恩来总理亲自批示，新中国第一所航空航天高等学府由清华、北洋大学、川大、厦大等八所院校的航空系合并组建成



### 成长：改革开放之际，第二代北航人

服务创造出多项中国历史上的第一  
为中国航空航天事业和社会经济建设做出了历史性贡献



### 未来：百年变革之中，第三代北航人

扎根中国大地建设世界一流大学  
学校的国际竞争力和学术影响力持续攀升

## Beihang in the Past Years

### Three Generations of Beihang people: Original aspiration and Mission



#### Birth-the first generation of Beihang people: at the time of national construction

In 1952, Premier Zhou Enlai directed, new China's first aerospace university



#### Growth-the second generation of Beihang people: at the time of reform and opening up

The service created a number of firsts in Chinese history  
It has made historic contributions to China's aerospace industry and social and economic construction



#### Future-the third generation of Beihang people: in a century of transformation

build a world-class university  
The university's international competitiveness and academic influence continue to rise

## Beihang in the Past Years

### • World War II

– “航空救国” National Salvation by aviation industry

### • Year 1952

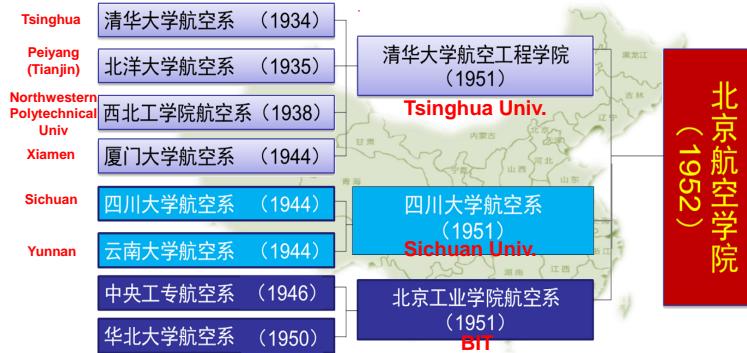
- 建校：设立飞机、发动机两个系，各设置设计、工艺两个专业
- The University Founded: Beijing Institute of Aeronautics.
- Two Departments: Aircraft, Engine; Two specialties: Design, Technology.

72<sup>th</sup> ANNIVERSARY



北京航空航天大学  
70周年校庆  
70th ANNIVERSARY of BUAA

## Beihang in the Past Years



## Beihang in the Past Years

### 建校元勋：海外归来 创建北航

27个教授 Professor、19个副教授 Associate Professor, 80%从海外归来

- 沈元：伦敦大学帝国理工学院空气动力学博士/ Imperial College London
- 王俊奎：师从冯·卡门教授，加州理工硕士、斯坦福博士/ Stanford
- 陆士嘉：师从哥廷根大学普朗特教授，创建我国第一个空气动力学专业/ Georg-August-Universität Göttingen
- 林士谔：麻省理工学院博士，师从著名陀螺仪表专家德雷珀博士/MIT
- 屠守锷：麻省理工学院硕士，两弹一星功勋奖章，在北航创办第一个火箭系/ MIT



53年，北航在一片农田上动工，千人奋战半年，完成6万平米建筑，奠定学校基础。

## Beihang in the Past Years

### • Year 1953

- 1953年10月正式进入现校址
  - Move to current campus in October, 1953.
- ### • Year 1954
- 增设飞机设备、航空材料两个系
  - Two departments: Aircraft equipment, Aeronautical Materials
- ### • Year 1956
- 出版《北京航空学院学报》.成立了当时国内航空高等院校惟一的航空工程经济系。
  - BIA Journal published.
  - Department of Aviation Engineering Economics established (Unique in China).
  - 倡导广大学生要树立“艰苦顽强、独立钻研”的学习态度，
  - The spirit of **indomitable and tenacious, independent study**.

## Beihang in the Past Years

### • Year 1958

- 全校师生在100天内，完成了周恩来总理亲自批准的“北京一号”轻型旅客机的研制，同年9月24日试飞成功，并进行了京沪间2500公里的航线试飞；
- Completing the development of the "Beijing No.1" aircraft by all the teachers and students in 100 days, approved by Premier Zhou Enlai.
- And conducted a successful test route of 2500 kilometers between Beijing and shanghai in the same year.



## Beihang in the Past Years

### • Year 1958

- 研制成功了我国第一枚探空火箭——“北京二号”，于同年9月22日在东北白城子靶场发射试验成功；研制成功了我国第一架无人驾驶飞机——“北京五号”。
- The development of China's first sounding rockets -- "Beijing No. 2", launch success in September 22nd 1958; successfully developed China's first unmanned aircraft -- "Beijing No. 5".



## Beihang in the Past Years

### • Year 1958

- 北航还成立了全国第一个火箭系和航空无线电系。
- Established departments of rocket system and aviation radio system.(First in China)
- 新设立解算装置、火箭地面机械与发射装置专业。
- Establishment the specialties: computing devices, rocket ground machinery and launching equipment.



## Beihang in the Past Years

### • Year 1959

- 《关于在高等学校中指定一批重点学校的决定》，北航成为全国第一批16所重点高校之一。这是对北航成立7年来工作的充分肯定。
- Beihang became one of the first batch of 16 key universities in China. This is fully affirmed the education and research to Beihang as a 7-years history university.

## Beihang in the Past Years

### • Year 1988

- 1988年5月1日，经国家教委批复，北航正式启动新校名——北京航空航天大学。标志着北航已从单一工科，发展成为以工为主、工理文管相结合的，多层次、多规格办学的综合性科技大学。
- Approved by the State Education Commission, the official launch of the new name: Beijing University of Aeronautics and astronautics
- From a single engineering institute, become a Comprehensive University of science and technology, management and art, with multi-level education.

# Beihang in the Past Years

- Year 2002

Beijing University of Aeronautics and astronautics

  
Beihang University



# Beihang Today

□ 入围一流大学A类（共36所）

(Double First-Class initiative)

➢ 7学科入选

Aerospace  
航空航天  
学科群

信息  
学科群

Information

- ① 航空宇航科学与技术 Aerospace Science and Technology
- ② 材料科学与工程 Materials Science and Engineering
- ③ 力学 Mechanics
- ④ 仪器科学与技术 Instrument Science and Technology
- ⑤ 软件工程 Software engineering
- ⑥ 计算机科学与技术 Computer Science and Technology
- ⑦ 控制科学与工程 Control Science and Engineering

排名	学校名称	学科数
1	北京大学	41
2	清华大学	34
3	浙江大学	18
4	复旦大学	17
4	上海交通大学	17
6	南京大学	15
7	中国人民大学	14
8	中国科学技术大学	11
8	北京师范大学	11
8	东南大学	11
8	中山大学	11
12	武汉大学	10
13	中国农业大学	9
14	华中科技大学	8
15	西安交通大学	8
16	北京航空航天大学	7
16	哈尔滨工业大学	7
16	同济大学	7

# Beihang Today

211工程高校、985工程高校、首批2011计划国家协同创新中心

国家“双一流”建设高校名单中：一流大学（A类）高校

- 在职教职工3907人：专任教师2147人（截至2017年底）
- 全日制在校生30642人：本科生15596人，硕士9336人，博士4492人，留学生1218人



# Beihang Today

□ 2017年12月，教育部第四轮学科评估

➢ A+：金牌学科（全国第一或并列第一）

➢ A+/A-/A-：一流学科（全国前10%）

➢ 我校23个一级学科参评

✓ 一流学科14个，A类比例60.87%

✓ 金牌学科4个，再创佳绩！

- ① 航空宇航科学与技术/Aerospace Science and Technology
- ② 仪器科学与技术/Instrument Science and Technology
- ③ 材料科学与工程/Materials Science and Engineering
- ④ 软件工程/Software Engineering

序号	学科名称	类别
1	航空宇航科学与技术	A+
2	仪器科学与技术	
3	材料科学与工程	
4	软件工程	
5	控制科学与工程	A
6	计算机科学与技术	
7	管理科学与工程	
8	力学	
9	机械工程	A-
10	信息与通信工程	
11	交通运输工程	
12	生物医学工程	
13	公共管理	

北航金牌学科和一流学科均排名全国前12

Both the 'gold medal' discipline and the first-class discipline of BEihang university rank among the top 12 in China

# Beihang Today

推动和参与筹建3个国家实验室

To promote and participate in the establishment of 3 national laboratories

航空科学与技术国家研究中心(北京)

航空动力国家研究中心(北京)

量子信息(合肥&北京)

3个 北京市高精尖创新中心

3 high-tech innovation centers in Beijing

13个 国家级重点实验室

13 national key laboratories

70+个 省部级重点实验室

70+ provincial and ministerial key laboratories

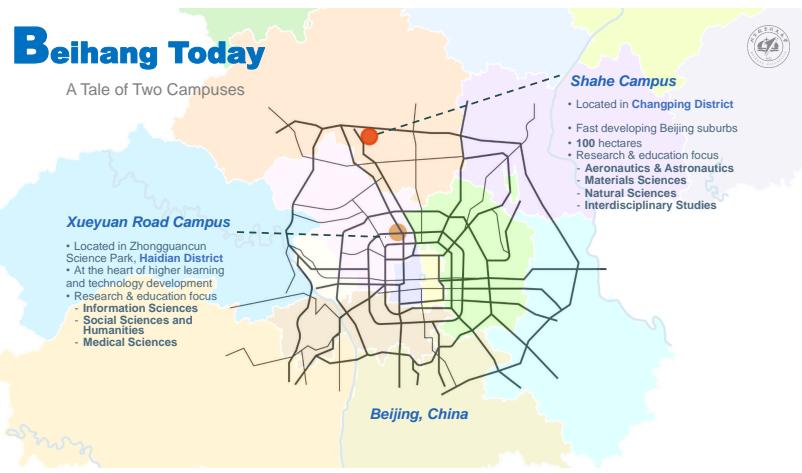


# Beihang Today

类别	名称	学院
国家重点实验室	软件开发环境	计算机学院
	虚拟现实技术与系统	计算机学院
国防科技重点实验室	惯性技术	仪器学院
	航空发动机气动热力	动力学院
	飞控一体	自动化学院
	可靠性与环境工程技术	可靠性学院
国家工程实验室	大型金属构件增材制造	材料学院
	综合交通大数据应用技术	电子学院
	虚拟现实/增强现实技术及应用	计算机学院
国家工程技术研究中心	国家科技资源共享服务	计算机学院
国家级测评中心	高性能碳纤维检测评价中心	材料学院
国防科技工业创新中心	高效数控加工	机械学院
	激光增材制造	材料学院

## Beihang Today

A Tale of Two Campuses



## Beihang Today

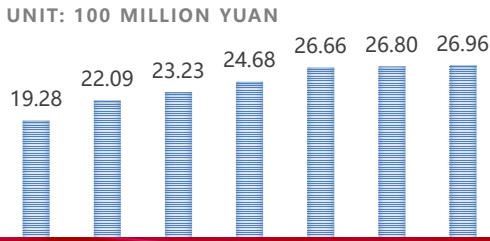
Across the most thriving cities in China



## Beihang Today

### 年科研经费R&D

单位: 亿元



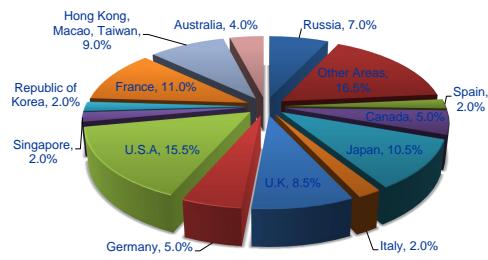
近年来研究经费总量稳居全国前五，人均全国第一

The total amount of research funds steadily ranks the top 5 in China and the 1st in China per capita

## Global Beihang

■ International Partners: 185

Europe (41.0%), Asia (31.0%), North America (21.0%), Oceania (5.0%), Africa (1.5%), South America (0.5%).



## Global Beihang

• The “UPS” International Strategy

### ➤ University – University

- Foster bilateral and multilateral partnerships
- Establish joint research and education institutions/centres

### ➤ Professor – Professor

- Exchange faculty and staff
- Encourage applications for joint S&T projects
- Jointly supervise graduate students

### ➤ Student – Student

- Study abroad – with a variety of options: degree programs, exchange, internships, summer/winter visits etc.
- International education: attracting students from all around the world to study at Beihang

## Global Beihang

### • Joint School

- Sino-French Engineer School

### • Student exchange programs: 55

### • Double degree programs: 11

### • Global consortia membership:

- TANDEM Alliance - Erasmus Mundus External Cooperation Window
- Sino-Spanish University Consortium (16 members)
- Sino-Russian University Consortium (30 members)



# Global Beihang

## • International Education

### ➤ At a glance:

- 1200+ degree students from 100 countries
- One of the largest international student populations in engineering studies
- Among the first universities to offer degree courses in the English language in China



# Global Beihang

## • International Education

### ➤ 37 Doctoral programs and 47 Master Programs available in English on the postgraduate level

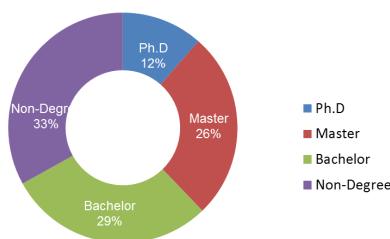
### ➤ 5 undergraduate programs offered in English

- Aircraft Design & Engineering
- Electrical Engineering & Automation
- Civil Engineering
- International Economics & Trade
- Mechanical Engineering & Automation



# Global Beihang

## • International Education – Student Distribution



# Global Beihang

1993	The first batch Int'l Students for master degree /首批入学
1994	Chinese Language Training Center /成立汉语培训中心
1999	Accept Int'l Students funded by CSC /接收中国政府奖学金学生
2004	International School was established /成立国际学院
2007	BUAA International Students Scholarship /设立留学生奖学金
2008	CSC Postgraduate Program /获批中国政府奖学金自主招生项目
2013	Education Center for APSCO /获批亚太空间合作组织教育中心
2014	UN Regional Centre established in November
2018	.....

# Beihang Tomorrow

- 明确了“顶尖工科、一流理科、精品文科、优势医工”学科建设方针
  - 航空航天学科顶尖地位/ Top position in aeronautics and astronautics
  - 空天信融合特色/ Aeronautics, Astronautics and Information integrated
  - 理工文医交叉的学科体系/Interdisciplinary of science, technology, literature and medicine
- 强化落实立德树人根本任务/ Foster strengthening moral education and cultivating people as the fundamental task
- 创新大类培养、通专结合、科教融通等人才培养新模式



### 世界一流学府

北航立志成为全球顶尖的航空航天高等教育机构，持续培养高质量的航空航天专业人才，为人类科技进步贡献力量。



### 科研实力提升

在未来十年，北航将显著增强学科竞争力与科研能力，成为国际航空航天领域的领头羊，引领行业创新与发展。



### 国际影响力扩大

通过深化国际交流与合作，北航旨在吸引更多国际学生与学者，提升在全球范围内的知名度与影响力。

# 北航建设世界一流大学的三步走战略

Three-step strategy to build a world-class university

## 第一步

到建校70周年（2022年）

- 进入国内高校的“领跑梯队”，主要指标进入国内前10名
- Enter the "leading echelon" of Chinese universities, the main indicators into the top 10

## 第二步

到建校80周年（2032年）

- 整体办学实力基本达到世界一流大学水平，实现与世界一流大学的“比肩并跑”，主要指标进入国际前200名
- Basically reached the level of world-class universities, achieving "parallel and running" with world-class universities, and among the top 200 in the international top 200 in main indicators

## 第三步

到建校100周年（2052年）

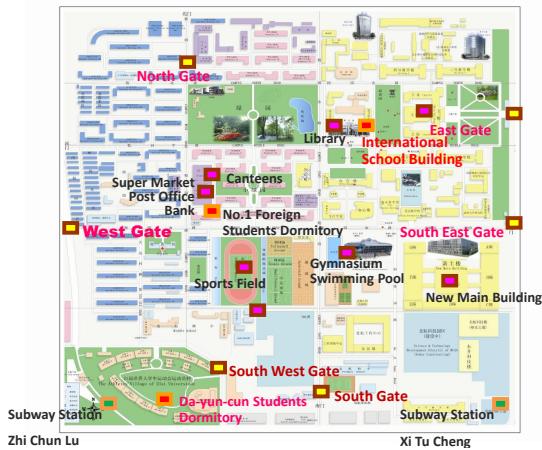
- 整体办学实力进入世界一流大学前列，创出一条具有鲜明特色世界一流大学建设的“北航之路”，主要指标进入国际前100名

1-10-100：世界一流，国内前十，国际前百



# Map

- Main Building
- New Main Building
- Library
- Gymnasium
- Swimming Pool
- Sports Field
- Canteens
- Supermarket
- Post Office
- Bank



# Student Card

## Where to recharge



1<sup>st</sup> Floor of HEIYI Building 合一楼一层  
East Side

## If I lost...



RUXIN Service Center  
Opposite to the gymnasium

# Explore Beihang

- 3号教学楼?
- 羽毛球馆?
- 国际学院 Wechat?
- 沙河校区?
- TD线?

# Accommodation

## Da-yun-cun Students dormitory



Built in 2001, for the World University Games.



# Library

## How to enter



7:00-22:30 Daily

1800 seats  
2.7 million books  
74 e-databases  
18 thousands international journals

Online Public Access Catalogue  
<http://lib.buaa.edu.cn>

# Wifi & Internet

BUAA-WIFI



- 10GB for free; Buy more in the RUXIN service center (with your student card)

## Cable network

- In the **international school building** . . .
- In the dormitory: Pls consult from the property services Office (Basement, No. 10 BLDG)

I'm free

Maybe you need it...  
5 yrs before?

# Campus



# Campus



# Sports Facilities

## The Track



5:00-23:00 daily

# Sports Facilities

## Football & Basketball



Free of charge  
How to book for the game or match?

# Sports Facilities

## Indoor Swimming Pool



Open daily in the afternoon and evening;  
16:00-18:00, 18:30-20:30  
10 RMB/person with student card.

## Badminton Court



Open daily from 7:00am to 10:00pm;  
Book for the next two days from 7:00am;  
East gate of gymnasium.

# Concert Hall and Art Gallery

## Chenxing Concert Hall



Poster outside the gate  
Student ticket: 10-20 RMB  
Others: 40-80 RMB  
Buy the ticket with student card only.



# Concert Hall and Art Gallery

## Aerospace Museum



Open daily except Sunday;  
Free enter with student card.

## Art Gallery



Open daily except Monday;  
Free enter with student card.



# Heyi Building 合一楼

## First Floor



Bank, Post Office, Book Store, Supermarket

## 2<sup>nd</sup>-4<sup>th</sup> Floor



Canteens

Muslim canteen on the 4<sup>th</sup> floor

## Basement



Canteen

# Cafeterias

## Sculpture in time/雕刻时光



South of the swimming pool

## Wings



Lobby of training center hotel

## Truth Café/致真咖啡-悦读生活书房



Outside the south gate of teaching area

# Campus Culture



The Beihang  
Lectures - a  
forum for  
interacting  
with great  
minds

"Feng Ru Cup"  
Students  
Academic  
&Scientific  
Works  
Competitio  
n



**SCHOLARSHIP**  
**@ BEIHANG**

# Scholarship

Chinese Government Scholarship

Beijing Government Scholarship

Beihang Scholarship for Foreign Students

Confucius Institute Scholarship

Scholarship from Enterprises

# Scholarship

Chinese Government Scholarship

Available to all  
Undergrads

Beijing Government Scholarship

Beihang Scholarship for Foreign Students

Confucius Institute Scholarship

Scholarship from Enterprises

# Scholarship

优秀外国留学生奖学金

Distinguished Foreign Students Scholarship

- Scholarship of Excellent Study
  - Aims to award who study hard and diligently in BUAA.
  - 5,000/3,000/1,000 RMB
- Scholarship of Outstanding Behavior.
  - Aims to award who obtain great achievement in science, sports, arts, cultural exchange and public benefit activities.
  - 3,000/2,000/1,000 RMB

# Scholarship

WHEN & HOW

Self-Supported Foreign Students Scholarship:

APRIL

Distinguished Foreign Students Scholarship:

OCTOBER

# So IMPORTANT

WEBSITE

Log onto the School Website <http://is.buaa.edu.cn>

WECHAT

Follow the Wechat public number



- 作业题目：选择留学中国、留学北航的原因  
(Topic: WHY did you choose China and choose Beihang?)
- 作业格式：Pdf or Doc format, 100 words.
- 以“学号-姓名”命名 (Student ID-Name)
- [suli@buaa.edu.cn](mailto:suli@buaa.edu.cn)
- 截止日期DDL: 18 OCT.



THANK YOU!

SU Li  
General Affairs Office  
Room 207, International School  
Tel:82339326  
E-mail: [suli@buaa.edu.cn](mailto:suli@buaa.edu.cn)



## 当代中国发展与社会实践

Contemporary China's Development and Social Practice

### 中国的国家治理体系与国际交往 China's National Governance System and International Exchanges

## 中国现代政治制度 China's Modern Political System

- 人民代表大会制度
- 民族区域自治制度
- 基层群众自治制度
- 中国共产党领导的多党合作和政治协商制度
- The system of people's congresses
- The system of regional ethnic autonomy
- The system of self-governance at the primary society layers
- The system of multi-party cooperation and political consultation under the leadership of the CPC

全过程人民民主  
Whole-process people's democracy

<https://weibo.com/tv/show/1034:5080693668249625>



## 国家政体 Political Structure of State

- 国家政体的形式/The forms of state government
- 共和国、君主立宪、联邦、合众国……
- Republic, Constitutional Monarchy, Federation, United States...

## 中国的行政区域体系 Administrative Region System in China

- 四级地方行政机构
- Four levels of local administration
  - 省、市、县区、乡镇
  - Province, city, county/district, township
- 人民基层自治团体
- Self-governance System of the Primary Society Layers
  - 村民委员会(village)、居民委员会.community)
  - Village, community

## 行政单位 (1) Structure of Administrative Divisions

- 省级行政区: 34个
- Provincial-level administrative region: 34
  - 省 Province (23个)
  - 自治区 Autonomous Region (5个: 内蒙古自治区、新疆维吾尔自治区、广西壮族自治区、宁夏回族自治区、西藏自治区) **National Minority**
    - Xinjiang Uygur Autonomous Region; Nei Mongol Autonomous Region; Guangxi Zhuang Autonomous Region; Ningxia Hui Autonomous Region; Tibet Autonomous Region
  - 直辖市 Municipality directly under the central government (4个: 北京、上海、天津、重庆) Beijing, Shanghai, Tianjin, Chongqing
  - 特别行政区 Special Administrative Region (2个: 香港、澳门)
    - Hongkong SAR, Macao SAR



## 行政单位 (2) Structure of Administrative Divisions

- 地市级行政区域: 330+
- Prefecture-level administrative regions: 330+
  - 地级市 Prefecture-level Cities : 290+
  - 地区 Regions : 7
    - 黑龙江省 (大兴安岭地区) Daxinganling in Heilongjiang (Greater Khingan Mountains)
    - 西藏自治区 (阿里地区) Ngari Prefecture in Tibet
    - 新疆维吾尔自治区 (和田地区、喀什地区、塔城地区、阿勒泰地区、阿克苏地区) Hotan Prefecture, Kashgar Prefecture, Tacheng Prefecture, Altay Prefecture, Aksu Prefecture in Xinjiang
  - 自治州 Autonomous Prefecture : 30
  - 盟 League: 3



## 自治州、盟 Autonomous Prefecture, League

省/自治区	自治州	省/自治区	自治州
Jilin 吉林省	延边朝鲜族自治州 Yanbian Korean Autonomous Prefecture	Gansu 甘肃省	临夏回族自治州 Linxia Hui Autonomous Prefecture
Hubei 湖北省	恩施土家族苗族自治州 Enshi Tujia and Miao Autonomous Prefecture	甘南藏族自治州 Gannan Tibetan Autonomous Prefecture	甘南藏族自治州 Gannan Tibetan Autonomous Prefecture
Hunan 湖南省	湘西土家族苗族自治州 Xiangxi Tujia and Miao Autonomous Prefecture	海南藏族自治州 Hainan Tibetan Autonomous Prefecture	海南藏族自治州 Hainan Tibetan Autonomous Prefecture
四川省 Sichuan	阿坝藏族羌族自治州 Aba Tibetan and Qiang Autonomous Prefecture	海北藏族自治州 Haibei Tibetan Autonomous Prefecture	海北藏族自治州 Haibei Tibetan Autonomous Prefecture
贵州省 Guizhou	甘孜藏族自治州 Ganzi Tibetan Autonomous Prefecture	海西蒙古族藏族自治州 Haixi Mongolian and Tibetan Autonomous Prefecture	海西蒙古族藏族自治州 Haixi Mongolian and Tibetan Autonomous Prefecture
云南省 Yunnan	凉山彝族自治州 Liangshan Yi Autonomous Prefecture	黄南藏族自治州 Huangnan Tibetan Autonomous Prefecture	黄南藏族自治州 Huangnan Tibetan Autonomous Prefecture
	黔东南苗族侗族自治州 Qiandongnan Miao and Dong Autonomous Prefecture	果洛藏族自治州 Goluo Tibetan Autonomous Prefecture	果洛藏族自治州 Goluo Tibetan Autonomous Prefecture
	黔西南布依族苗族自治州 Qianxinan Buyi and Miao Autonomous Prefecture	玉树藏族自治州 Yushu Tibetan Autonomous Prefecture	玉树藏族自治州 Yushu Tibetan Autonomous Prefecture
	黔东南布依族苗族自治州 Qianxinan Buyi and Miao Autonomous Prefecture	伊犁哈萨克自治州 Ili Kazak Autonomous Prefecture	伊犁哈萨克自治州 Ili Kazak Autonomous Prefecture
	楚雄彝族自治州 Chuixiong Yi Autonomous Prefecture	博尔塔拉蒙古自治州 Boratla Mongol Autonomous Prefecture	博尔塔拉蒙古自治州 Boratla Mongol Autonomous Prefecture
	红河哈尼族彝族自治州 Honghe Hani and Yi Autonomous Prefecture	昌吉回族自治州 Changji Hui Autonomous Prefecture	昌吉回族自治州 Changji Hui Autonomous Prefecture
	文山壮族苗族自治州 Wenshan Zhuang and Miao Autonomous Prefecture	巴音郭楞蒙古自治州 Bayingolin Mongolian Autonomous Prefecture	巴音郭楞蒙古自治州 Bayingolin Mongolian Autonomous Prefecture
	西双版纳傣族自治州 Xishuangbanna Dai Autonomous Prefecture	克孜勒苏柯尔克孜自治州 Kizilsu Kirgiz Autonomous Prefecture	克孜勒苏柯尔克孜自治州 Kizilsu Kirgiz Autonomous Prefecture
	大理白族自治州 Dali Bai Autonomous Prefecture		
	德宏傣族景颇族自治州 Dehong Dai and Jingpo Autonomous Prefecture		
	怒江傈僳族自治州 Nujiang Lisu Autonomous Prefecture		
	迪庆藏族自治州 Diqing Tibetan Autonomous Prefecture		

内蒙古自治区: Inner Mongolia  
— 锡林郭勒盟、阿拉善盟、兴安盟  
Xilin Gol League, Alxa League, Hinggan League



## 行政单位 (3) Structure of Administrative Divisions

- 中国的县形成于战国，确立于秦朝，历代行政区划有变更  
Chinese counties were formed in the Warring States period and established in the Qin Dynasty.  
There were changes in administrative divisions in the past dynasties.
- 县级行政区域 County-level administrative areas : 2800+
    - 区 District: 970+ (如: 北京市海淀区) Haidian District
    - 县级市 County-level city: 380+ (如: 河北省北戴河市、江苏省昆山市)
    - 县 County: 1300+ (如: 河北省承德市滦平县)
    - 其他 Other: 自治县 117、旗 49、自治旗 3、特区 1、林区 1  
Autonomous Counties 117, Banners 49, Autonomous banners 3, Special District 1, Forest Region 1



## 行政单位 (4) Structure of Administrative Divisions

- 乡镇级行政区域 Township level administrative areas: ~40,000

— 街道 (subdistrict, 8000+, 位于城市化水平较高的城区)

subdistrict: located in the urban area with a high level of urbanization

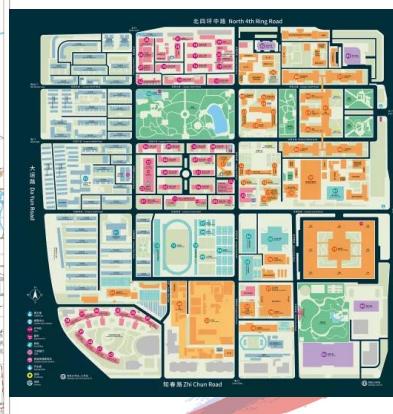
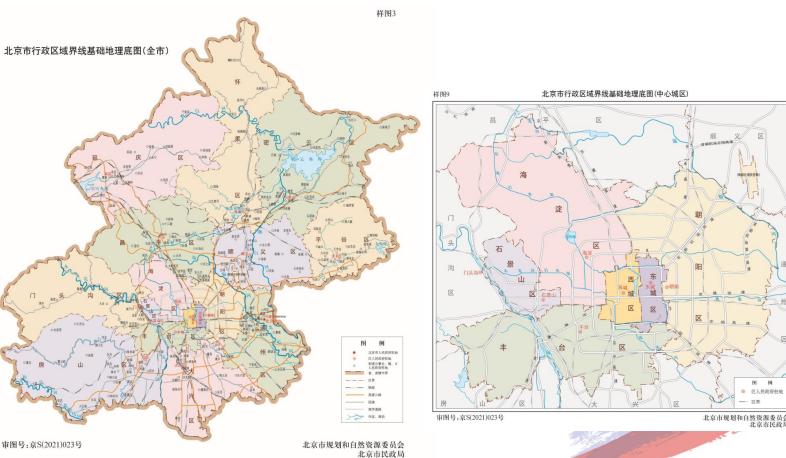
— 镇 (约21000, 比乡区域面积大, 人口规模多, 经济发展较好, 非农业人口多, 并有一定工业区域。)

Town (larger than the rural township: more population scale, better economic development, more non-agricultural population, and a certain industrial area.)

— 乡 (约8000, 比镇区域面积小, 人口规模少, 经济发展弱, 以农业为主)

Rural township (~8000, smaller than town area, small population, weak economic development, mainly agriculture)

— 民族乡 (近1000) Ethnic Township、苏木(蒙古语cym, 150+) Ethnic Sumu .....



## 基层自治组织

- 基层群众性自治组织
- Self-governance System of the Primary Society Layers
  - 村民委员会
  - 居民委员会
  - Village committee
  - Residents committee

## 民族区域自治 Regional ethnic autonomy

- 自治区—自治州、盟—自治县、旗、自治旗—民族乡、苏木.....
- ZIZHIZHOU (Autonomous regions)- ZIZHIZHOU (Autonomous prefectures), MENG (League)-
- ZIZHIXIAN (Autonomous counties), QI (Banners), ZIZHIQI (Autonomous banners) -
- MINZUXIANG (Ethnic townships), Sumu
  - 根据2010年第六次全国人口普查的数据, 汉族占中国总人口的91.51%, 少数民族占8.49%。
  - According to the 6th national census in 2010, Han People account for 91.51% of China's total population, while ethnic minorities account for 8.49%.
  - 自治的内容: 民族立法权; 执行权; 财政经济自主权; 文化、语言文字自主权。
  - The content of autonomy: national legislative power; Executive power; Financial and economic autonomy; Cultural and language autonomy.
  - 自治特点: 国家指导下的自治、民族因素与区域因素相结合、经济因素与政治因素相结合、基于民族身份
  - Characteristics of autonomy: autonomy under the guidance of the state, combination of ethnic factors and regional factors, combination of economic factors and political factors, based on ethnic identity



## 人民代表大会制度 National People's Congress

- 全国人民代表大会与地方各级人民代表大会（五年一届）
- National People's Congress and Local People's Congresses (term: five years)
- 全国人大代表2900多名 (县级行政区域: 2800+)
- More than 2,900 NPC deputies (county-level administrative districts: 2,800+)
  - 不以党派为团组，以地方为团组 not by parties, by provinces
  - 间接选举产生: 按人口比例, 适当照顾少数民族, 女性代表一般不少于20%, 为华侨分配适当名额
  - Indirect election: In proportion to population, With due regard for ethnic minorities, female representation usually no less than 20%...
- 全国人大会议每年一次, 会期大约两周 The NPC meets once a year for about two weeks
- 闭会期间由人大常委会(Standing Committee)行使职权
- The Standing Committee of the NPC exercises its functions and powers during the inter-sessional period

## 人民代表大会制度 National People's Congress

- 制定修改宪法、法律； To enact and amend the Constitution and laws;
- 选举产生国家行政机关、审判机关、检察机关； To elect administrative, judicial and procuratorial organs of the State;
- 审查和批准国民经济和社会发展计划和计划执行情况的报告； To examine and approve plans for national economic and social development and reports on their implementation;
- 审查和批准国家的预算和预算执行情况的报告； To examine and approve the state budget and reports on its implementation;
- 改变或者撤销全国人民代表大会常务委员会不适当的决定； To alter or annul inappropriate decisions of the Standing Committee of the NPC;
- 省、自治区和直辖市的建置，特别行政区的设立及其制度； The establishment of provinces, autonomous regions and municipalities directly under the Central Government, the establishment of special administrative regions and their systems;
- 战争和和平的问题； Matters of war and peace;
- 其他职权。 Other functions and powers.



## 审议、表决 Review and vote



## 法律修改决策过程——以《立法法》为例 Decision-making process of law amendment (Legislation Law as an example)

2000年3月15日，九届全国人大三次会议通过《中华人民共和国立法法》。

On March 15, 2000, the Third Session of the ninth NPC adopted the Legislation Law of the People's Republic of China.



## 法律修改决策过程——以《立法法》为例 Decision-making process of law amendment (Legislation Law as an example)

2014年8月25日——**草案稿一审**: 十二届全国人大常委会第十次会议《立法法修正案草案》。一审稿共28条。一审后草案全文公布，征求社会公众意见。

August 25, 2014 -- **The first instance of the draft**: The draft Amendment to the Legislation Law at the 10th Session of the 12th NPC Standing Committee. A total of 28 articles. After the first review, the full text of the draft was released for public comment.

2014年10月——**草案稿二审**: 根据党的十八届四中全会的精神，全国人大法律委员会对立法法修正案草案进行逐条审议、修改，形成草案二审稿。二审后草案全文公布，再次征求社会公众意见。

October 2014 -- **Second instance of the draft**: In accordance with the spirit of the fourth Plenary Session of the 18th CPC Central Committee, the Law Committee of the NPC deliberated and revised the draft amendments to the Legislation Law article by article, resulting in the second review of the draft. After the second review, the full text of the draft was released to solicit public opinion again.

2014年12月22日——**草案提交全国人大常委会第十二次会议审议**。二审草案稿由28条增至35条。

December 22, 2014 -- The draft was submitted to the 12th session of the NPC Standing Committee for deliberation. The second draft was increased from 28 to 35.

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## 法律修改决策过程——以《立法法》为例 Decision-making process of law amendment (Legislation Law as an example)

2015年3月——**草案稿三审**:

3月8日，草案三审稿提交十二届全国人大三次会议审议，近3000名人大代表听取了立法法修正案草案说明，此后各代表团进行了审议。

3月11日，全国人大法律委员会对代表们提出的修改意见进行审议，提出**修改决定草案**；12日，大会主席团会审议，决定将决定草案提请各代表团审议；接着，各代表团审议决定草案。法律委全体会议审议，提出**建议表决稿**。大会主席团会审议，决定将建议表决稿提请各代表团审议。各代表团审议建议表决稿。**大会主席团会决定将表决稿提请代表大会全体会议表决**。

March 2015 -- **Third instance of draft**:

On March 8, the third draft was submitted to the third session of the 12th National People's Congress (NPC) for deliberation. Nearly 3,000 NPC deputies listened to the explanation of the draft amendments to the Legislation Law and then deliberated by various delegations.

On March 11, the NPC Law Committee deliberated on deputies' suggestions for amendments and put forward a draft decision on amendments. On December 12, the presidium of the Conference deliberated and decided to submit the draft decision to all delegations for deliberation. Then, the delegations will review the draft decision - the Plenary session of the Legal Committee will review it, put forward the draft proposal - the presidium of the Congress will review it, and decide to submit the draft proposal to the delegations for deliberation - the presidium of the Congress will decide to submit the draft to the plenary session of the Congress for a vote.

## 法律修改决策过程——以《立法法》为例 Decision-making process of law amendment (Legislation Law as an example)

决定草案作出了27处实质性修改，其中对于税收法定、地方立法权广受关注的热点话题，一一作出回应。

2015年3月15日 通过修改决定：十二届全国人大三次会议表决通过了关于修改立法法的决定。

The draft decision made 27 substantive amendments, one of which responded to the topics such as statutory taxation and local legislative power.

**Revision Decision adopted on March 15, 2015**: The third session of the 12th National People's Congress adopted a decision on the revision of the Legislation Law.



## 基层人大代表选举 Election of Deputies to the People's Congresses at the Primary Society Layers



## 政治协商制度 Political Consultation System

- 中国共产党领导的多党合作和政治协商制度
- The system of multi-party cooperation and political consultation under the leadership of the CPC
  - 中国共产党执政 Ruling Party: Communist Party of China
  - 八个民主党派参政 Participating parties: eight democratic parties

中国国民党革命委员会  
Revolutionary Committee of the Chinese Kuomintang  
中国民主同盟  
China Democratic League  
中国民主建国会  
China Democratic Construction Association  
中国民主促进会  
China Association for Promoting Democracy

中国农工民主党  
Chinese Peasants and Workers Democratic Party  
中国致公党  
China Zhi Gong Party,  
九三学社  
JIU SAN Society  
台湾民主自治同盟  
Taiwan Democratic Self-Government League

## 人大与政协 NPC and CPPCC

- 人大的双重属性——权力机关+民意机关

- The dual nature of People's Congress: being an organ of power and an organ of public opinion
  - 人大——以地区为单位，表决成分大，法律约束力
  - National People's Congress - provincial unit, voting components, legally binding
  - 政协——按党派界别，协商成分大，政治影响力
  - People's Political Consultative Conference - according to the party sector, consultative component, political influence



## 政治发展——意见表达

### Political development - expression of opinion

- 草案——征求全社会意见 Draft -- Solicit opinions from the whole society
- 专业性意见表达——300多万各级人大代表, 30多万各级政协委员, 民主党派、团代会、工会、妇代会
- Professional expression of opinions
  - over 3 million deputies to people's congresses at all levels,
  - over 300,000 members of CPPCC committees at all levels
  - democratic parties, youth League congresses, trade unions and women's congresses
- 制度性意见表达团体 (学会、协会)
- Institutional expression groups (societies, associations)
- 功能性意见表达团体 (如媒体)
- Functional expression groups (e.g., media)

## 政治发展——现代化

### Political development

- 推进国家治理体系和治理能力现代化
- Modernize China's governance system and capacity.

## 现代化

### Modernization

#### 现代化的定义 Definition of modernization

现代化是社会从传统向现代的转型过程，涵盖经济、政治、文化等多方面全面发展。  
Modernization is a process of transformation of society from tradition to modernity, covering comprehensive development in many aspects, including economy, politics and culture.

#### 核心特征 Core features

现代化的核心在于工业化、城市化、科技革新及社会结构变化，推动社会进步与效率提升。  
The core of modernization lies in industrialization, urbanization, scientific and technological innovation and structural changes in society, which promote social progress and efficiency.

#### 全球视角 Global Perspectives

在全球范围内，现代化表现为国家间竞争与合作，促进全球经济一体化与文化交流。  
In the global context, modernization manifests itself in competition and cooperation among nations, promoting global economic integration and cultural exchanges.

## 中国式现代化

### Chinese Path to Modernization

#### 定义与区别 Definitions and Differences

强调以人民为中心，追求全面协调可持续发展，展现特有的发展路径。  
Emphasizing people-centeredness, pursuing comprehensive, coordinated and sustainable development, and demonstrating a unique development path.

#### 五大特征 The Five Characteristics

人口规模巨大的现代化、全体人民共同富裕的现代化、物质文明与精神文明相协调的现代化、人与自然和谐共生的现代化、和平发展的现代化路径。  
Modernization with a huge population; Modernization of common prosperity for all people; Modernization that harmonizes material civilization and spiritual civilization; Modernization of harmonious coexistence between human beings and nature; The path of modernization for peaceful development.

#### 实践案例 Practical Cases

城乡一体化、区域协调发展、生态保护、社会保障体系建设，是中国式现代化在实践层面的具体体现。  
Urban-rural integration, coordinated regional development, ecological protection, and the construction of social security system are the concrete manifestations of Chinese modernization at the practical level.

## 政治发展——城市化

### Political development - urbanization

#### 城市化水平 Urbanization level

- 2006年东、中、西部城市化水平分别为54.6%、40.4%和35.7%。
- In 2006, the urbanization level of the eastern, central and western regions was 54.6%, 40.4% and 35.7% respectively.
- 2011年的中国内地城市化率首次突破50%，达到了51.3%。
- In 2011, the urbanization rate in mainland China exceeded 50% for the first time, reaching 51.3%.
- 处于城市化高速期 In the high-speed period of urbanization

## 政治发展——农村

### Political development - rural areas

#### 农村基层治理面临的挑战

#### Rural primary society layers governance challenges

- 社会开放与治理的矛盾
- Contradiction between social openness and governance
- 经社不分造成的政经难题
- Political and economic difficulties caused by the separation of economy and society
- 城乡融合与城乡分治的矛盾
- The contradiction between urban-rural integration and urban-rural separation

## 政治发展——基层治理

Political development - Primary Society Layers governance

### 城市基层治理的变革

#### Reform of urban primary society layers governance

- 随着城市化进程的推进，人员流动的增加
- With the advancement of urbanization, the flow of people has increased
- 社区建设成为应对一系列挑战的新选择
- Community building has become a new choice to deal with a series of challenges
- 在党委领导、政府负责的前提下，协同基层自治组织，有序扩大民众参与，以实现社区有效治理，为社区居民提供优质公共服务。
- Under the leadership of the Party Committee and the responsibility of the government, and in coordination with grassroots autonomous organizations, we will expand public participation in an orderly manner, so as to realize effective community governance and provide quality public services to community residents.

## 政治发展——基层治理

Political development - Primary-level governance

- 国家治理体系和治理能力现代化，社区治理只能加强、不能削弱。
- Improving community governance is important in promoting the modernization of China's system and capacity for governance.

## 发展：中国特色的区域治理

Development: Regional governance with Chinese characteristics

- 伴随着中国经济发展，中国城市化进程迅速发展
- Along with China's economic development, China's urbanization process is developing rapidly
  - 城市群区域发展总体呈现出由点到线成面的“点—线—面”发展轨迹
  - Regional development of urban agglomeration shows a "point-line-plane" development trajectory
  - 1980年代以来，珠三角区域以深圳特区为龙头，发展成为珠三角城市群
  - Since the 1980s, the Pearl River Delta region, led by Shenzhen Special Economic Zone
  - 1990年代以来，以上海浦东新区为中枢的长三角经济第二极。
  - Since the 1990s, the Yangtze River Delta city cluster, with Pudong New Area developed rapidly and become the second pole of China's economy.
  - 进入21世纪，京津冀城市群
  - Entering the 21st century, the Beijing-Tianjin-Hebei city cluster



## 发展：中国特色的区域治理

Development: Regional governance with Chinese characteristics

“区域发展”成为治理体系和能力建设的研究热点

"Regional development" has become the focus of governance system and governance capacity construction

对政府发展与政府创新提出了新需求

New demands are put forward for government development and innovation

国际交往  
International Exchanges



## 汉代的国际交往

International exchanges in the Han Dynasty



## 唐代的国际交往

### International exchanges in the Tang Dynasty



## 当代的国际交往

### Contemporary International Exchanges



### “高质量共建‘一带一路’，携手实现共同发展繁荣”

- 深化互联互通，建设开放型世界经济
- 共建绿色丝路，促进人与自然和谐共生
- 发展数字经济，挖掘经济增长新动能
- Strengthen Connectivity in an Open World Economy
- Build Green Silk Road for Living in Harmony with Nature
- Develop Digital Economy as a New Source of Growth

基础设施“硬联通”、规则标准“软联通”、各国人民“心联通”，为促进世界经济复苏和落实联合国2030年可持续发展议程作出贡献。  
further facilitate infrastructure “hard connectivity”, rules and standards “soft connectivity”, as well as people-to-people “heart connectivity”, contributing to world economic recovery and the implementation of the 2030 Agenda for Sustainable Development.

## 人类命运共同体

### A Community of Shared Future for Mankind

- 在追求本国利益时兼顾他国合理关切，在谋求本国发展中促进各国共同发展。
- While pursuing its own interests, a country should accommodate the legitimate concerns of others. In pursuing their own development, countries should promote the common development of all and expand common interests among them.
- 人类只有一个地球，各国共处一个世界。
- Mankind has only one earth, and it is home to all countries.

## 人类命运共同体

### A Community of Shared Future for Mankind

- “在全球性危机的惊涛骇浪里，各国不是乘坐在190多条小船上，而是乘坐在一条命运与共的大船上。小船经不起风浪，巨舰才能顶住惊涛骇浪。”
- “Amidst the raging torrents of a global crisis, countries are not riding separately in some 190 small boats, but rather all in a giant ship on which our shared destiny hinges. Small boats may not survive a storm, but a giant ship is strong enough to brave a storm.”

## 国际权力观

### The Power in the International Relations

- 在经济全球化背景下，一国或区域的经济危机通过全球化机制的传导，可以迅速波及全球，危及国际社会整体。面对这些危机，国际社会只能“同舟共济”、“共克时艰”。
- Under the background of economic globalization, the economic crisis of one country or region can quickly spread to the whole world and endanger the whole international community through the transmission of globalization mechanism. In the face of these crises, the international community has no choice but to "pull together in times of difficulty".

## 共同利益观

### View of common interests

- 进入20世纪，国际社会的利益关系曾被描述为一种排他的零和关系，因此利益争夺引发战争是无法避免的。
- In the 20th century, the interests of the international community have been described as an exclusive zero-sum relationship, so it is inevitable that conflicts of interests will lead to wars.
- 经济全球化促使人们对传统的国家利益观进行反思，各国利益的高度交融使不同国家成为一个共同利益链条上的一环。
- Economic globalization prompts people to reflect on the traditional view of national interests. The high integration of national interests makes different countries become a link in the chain of common interests.
- 气候变化带来的冰川融化、降水失调、海平面上升等问题，不仅给小岛国带来灭顶之灾，也将给世界数十个沿海发达城市造成极大危害。
- The melting of glaciers, the imbalance of precipitation and the rise of sea level brought about by climate change will not only bring catastrophe to small island states, but also cause great harm to dozens of developed coastal cities around the world.

## 共同利益观

### View of common interests

- 面对越来越多的全球性问题，任何国家都不可能独善其身。
- 在这样的背景下，人们对共同利益也有了新的认识。人类已经处在“地球村”中，各国公民同时也是地球公民，全球的利益同时也就是自己的利益。
- Faced with an increasing number of global problems, no country can stay immune.
- In this context, people also have a new understanding of common interests. Mankind is now living in a "global village". Citizens of all countries are also citizens of the earth, and the interests of the world are their own.

## 可持续发展观

### Concept of Sustainable Development

- 工业革命以后，人类开发利用自然资源的能力得到了极大提高，但接踵而至的环境污染和极端事故也给人类造成巨大灾难。
- After the Industrial Revolution, mankind's ability to exploit and utilize natural resources has been greatly improved, but the ensuing environmental pollution and extreme accidents have also caused great disasters to mankind.
  - 《增长的极限》报告——若世界按照现在的人口和经济增长以及资源消耗、环境污染趋势继续发展下去，那么我们这个星球迟早将达到极限进而崩溃。
  - The *Limits to Growth* reports - If the current trend of population and economic growth, resource consumption and environmental pollution continues, our planet will reach its limit and collapse sooner or later.

## 可持续发展观

### Concept of Sustainable Development

- 1983年，联合国成立“世界环境与发展委员会”进行专题研究。1987年发表《我们共同的未来》报告，正式将可持续发展定义为“既能满足当代人需要，又不对后代人满足其需要的能力构成危害的发展”。
- In 1983, the United Nations established the "World Commission on Environment and Development" to conduct thematic studies. In 1987, the Report "Our Common Future" formally defined sustainable development as "development that meets the needs of the present without jeopardizing the ability of future generations to meet their own needs".
  - 1992年《里约环境与发展宣言》
  - 2002年《约翰内斯堡执行计划》
  - 2012年《我们憧憬的未来》
  - 中国：1994年发布《中国21世纪议程——中国21世纪人口、环境与发展白皮书》；1996年，可持续发展被正式确定为国家的基本发展战略之一。

## 全球治理观

### The Global Governance System

- 全球治理理论的核心观点是，由于全球化导致国际行为主体多元化，全球性问题的解决成为一个由政府、政府间组织、非政府组织、跨国公司等共同参与和互动的过程，这一过程的重要途径是强化国际规范和国际机制，以形成一个具有机制约束力和道德规范力的、能够解决全球问题的“全球机制”。
- 中国：秉承共商共建共享的全球观，积极参与全球治理体系改革与建设
  - 坚定维护以《联合国宪章》的宗旨和原则为核心的国际秩序和国际体系，推进国际关系民主化，支持联合国发挥积极作用，支持发展中国家在国际事务中的代表权和发言权，建设性参与国际与地区热点问题的解决进程，积极应对各类全球性挑战，维护国际和地区和平稳定。

## 全球治理观

### The Global Governance System

- The core view of global governance theory is that globalization leads to the diversification of international actors, and the solution of global problems becomes a process involving and interacting with governments, intergovernmental organizations, non-governmental organizations and transnational corporations. The important way of this process is to strengthen international norms and mechanisms. In order to form a "global mechanism" with institutional binding and ethical force that can solve global problems.
- China: Adhering to the global vision of extensive consultation, joint contribution and shared benefits, China has taken an active part in the reform and development of the global governance system
  - Firmly to the purposes and principles of the UN charter and the international system as the core of the international order, promote democratization in international relations, support the United Nations play an active role, support the representation and voice of developing countries in international affairs, constructive participation in international and regional hotspot issues solving process, actively cope with global challenges and maintaining international and regional peace and stability.

## 全球治理观 View on Global Governance

- 加强世界各国交流合作，推动全球治理机制变革，积极促进世界和平与发展。
- strengthen exchanges and cooperation among countries, promote reform of global governance mechanisms, and actively promote world peace and development.
- 五个维度/Five Dimensions:
  - 政治多极、经济均衡、文化多样、安全互信、环境可续。**
  - Multi-polar politics, balanced economy, diverse cultures, mutual trust in security and sustainable environment.**
- 倡导包容，增进思想理念共识。
- 让世界多样性成为人类社会进步的内在动力、人类文明多姿多彩的天然形态。
- Advocate inclusiveness and promote consensus on ideology.
- Let the diversity of the world become the internal driving force for human progress and the natural form of diverse human civilizations.

## 全球治理角色 Role on Global Governance

积极参与全球治理	联合国与国际组织合作	全球治理贡献实例
Active participation in global governance	Cooperation between the United Nations and international organizations	Examples of global governance contributions
作为负责任大国，深度参与全球治理，致力于解决全球性问题，如气候变化、公共卫生等，展现大国担当。	在联合国框架下发挥重要作用。支持多边主义，与世界卫生组织、世界银行等机构紧密合作，推动全球共同发展。	从G20峰会到巴黎协定，中国不仅参与规则制定，还通过实际行动，如新冠疫苗援助，为全球治理贡献力量。

## 全球发展倡议 The Global Development Initiative

- 更加强劲、绿色、健康的全球发展  
more robust, greener and more balanced global development
- 构建更加平等均衡的全球发展伙伴关系  
foster global development partnerships that are more equal and balanced
- 我们要大力弘扬和平、发展、公平、正义、民主、自由的全人类共同价值，摒弃小圈子和零和博弈。
- We need to advocate peace, development, equity, justice, democracy and freedom, which are the common values of humanity, and reject the practice of forming small circles or zero-sum games.

## 全球安全倡议 The Global Security Initiative

- 坚持共同、综合、合作、可持续的安全观。
- Stay committed to the vision of common, comprehensive, cooperative and sustainable security.
- 坚持尊重各国主权、领土完整。
- Stay committed to respecting the sovereignty and territorial integrity of all countries.
- 坚持遵守联合国宪章宗旨和原则。
- Stay committed to abiding by the purposes and principles of the UN Charter.
- 坚持重视各国合理安全关切。
- Stay committed to taking the legitimate security concerns of all countries seriously.
- 坚持通过对话协商以和平方式解决国家间的分歧和争端。
- Stay committed to peacefully resolving differences and disputes between countries through dialogue and consultation.
- 坚持统筹维护传统领域和非传统领域安全。
- Stay committed to maintaining security in both traditional and non-traditional domains.

## 全球文明倡议 The Global Civilization Initiative

- 共同倡导“尊重世界文明多样性”  
To respect and develop the diversity of world civilization
- 共同倡导“弘扬全人类共同价值”  
To promote the common values of all humanity
- 共同倡导“重视文明传承和创新”  
To emphasize the inheritance and innovation of civilization
- 共同倡导“加强国际人文交流合作”  
To strengthen people-to-people and cultural exchanges

## Video-BRI

- <https://newseu.cgtn.com/news/2023-10-17/What-is-China-s-Belt-and-Road-Initiative--1nU3lmiHqOQ/index.html>
- <https://news.cgtn.com/news/2021-11-20/Belt-and-Road-An-initiative-for-common-prosperity-15IEsY3Exxe/index.html>
- <https://news.cgtn.com/news/2020-05-21/CGTN-Observes-A-look-at-the-Belt-and-Road-Initiative-QG2qj68emQ/index.html>
- <https://news.cgtn.com/news/2021-12-08/How-does-the-Belt-and-Road-Initiative-benefit-people-around-the-world-15PDCKPBrsU/index.html>

# Video-BRI

- [https://www.bilibili.com/video/BV1U54Ae5EAo/?spm\\_id\\_from=333.337.search-card.all.click](https://www.bilibili.com/video/BV1U54Ae5EAo/?spm_id_from=333.337.search-card.all.click)
- <https://www.bilibili.com/video/BV1oM41197d6/>
- [https://www.bilibili.com/video/BV1EB4y1o7ev/?spm\\_id\\_from=333.337.search-card.all.click](https://www.bilibili.com/video/BV1EB4y1o7ev/?spm_id_from=333.337.search-card.all.click)
- [https://www.bilibili.com/video/BV1yH4y1X7ga/?spm\\_id\\_from=333.337.search-card.all.click](https://www.bilibili.com/video/BV1yH4y1X7ga/?spm_id_from=333.337.search-card.all.click)



- **Topic: Please share with us your knowledge and understanding of the Belt and Road Initiative? (~100words)**
- **请谈一下您对“一带一路”倡议的认识和理解。 Pdf or Doc format**
- **Student ID-Name**
- **suli@buaa.edu.cn**
- **DDL: 11 DEC.**

\*Please do not plagiarize, otherwise the assignment will be counted as 0 points



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## 科技创新与先进制造：驱动未来的双重引擎

Technological innovation and advanced manufacturing: the twin engines driving the future

- 推动全球经济发展的重要动力。
- 随着技术的不断进步：创新在制造业中的深度融合，制造业向智能化、绿色化、系统化转型趋势明显
- An important driving force for global economic development.
- With the continuous progress of technology: the deep integration of innovation in the manufacturing industry, The trend of manufacturing industry to intelligent, green and systematic transformation is more obvious.

## 为什么说“科学技术是第一生产力”

WHY science and technology are the primary productive forces

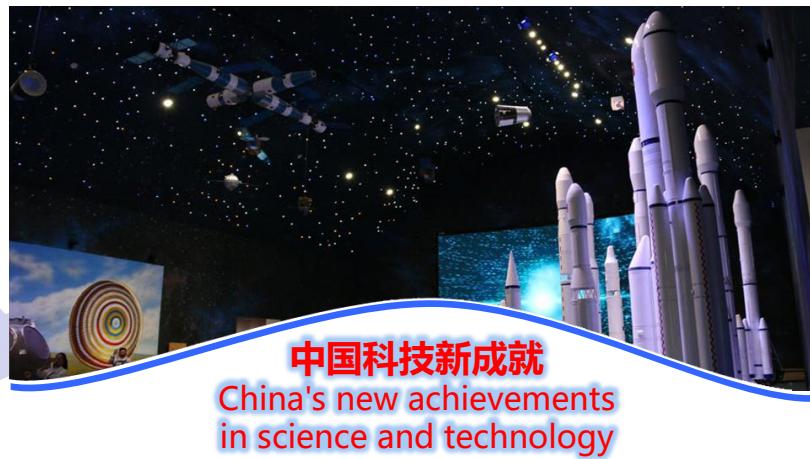
- 科技是经济增长的“火车头”
- 科技是制度变革的“发动机”
- 科技是文化发展的“助力器”
- Science and technology is the "locomotive" of economic growth
- Science and technology is the "engine" of institutional change
- Science and technology is the "booster" of cultural development



## 总体目标

The Overall Goal

- 建设现代化经济体系，必须把发展经济的着力点放在实体经济上.....加快发展先进制造业，推动互联网、大数据、人工智能和实体经济深度融合。
- In building a modernized economy, the real economy must be focused on...
- To accelerate the development of advanced manufacturing, and promote the deep integration of the Internet, big data, artificial intelligence and the real economy.



## 发动科技创新的强大引擎

A powerful engine for scientific and technological innovation

01

### 发动科技创新的强大引擎 A powerful engine for scientific & technological innovation



不创新不行，创新慢了也不行。如果我们不识变、不应变、不求变，就可能陷入战略被动，错失发展机遇，甚至错过整整一个时代。

科技兴则民族兴，科技强则国家强

When science and technology prosper, the nation will prosper,  
When science and technology are strong, the country will be strong

有多大担当才能干多大事业，尽多大责任才能有多大成就  
Great achievement comes with great responsibility

### 发动科技创新的强大引擎

A powerful engine for scientific and technological innovation

#### 五点要求

- 夯实科技基础 在重要科技领域跻身先进行列  
To consolidate the foundation of science and technology -- to rank among the advanced in important fields of science and technology
- 强化战略导向 破解创新发展科技难题  
To strengthen strategic orientation -- Resolving difficult problems in developing science and technology through innovation
- 加强科技供给 服务经济社会发展主战场  
To strengthen the supply of science and technology -- the main battlefield of serving economic and social development
- 深化改革创新 形成充满活力的科技管理运行机制  
To deep reform and innovation -- forming a dynamic mechanism for managing science and technology
- 弘扬创新精神 培育符合创新发展要求的人才队伍  
To carry forward the spirit of innovation -- cultivate talents in line with the requirements of innovative development

### 发动科技创新的强大引擎

A powerful engine for scientific and technological innovation

The new "science and technology planning system" and a "mechanism for project formation" were initially established

Protection of intellectual property rights was strengthened

新的科技计划体系和项目形成机制初步建立

企业研发费用的税前加计扣除范围扩大

The scope of additional tax deductions for enterprises' R&D expenses has been expanded

国家科技管理平台基本建成

The national science and technology management platform has been basically completed

知识产权保护力度增强

让经费围着科研转

Leting funding revolve around research

让科研人员名利双收

Make researchers rich and famous

### 科技体制改革深化激发人才活力

deepen the reform of the science and technology system to stimulate the vitality of human resources

## 国家科学技术奖

State science and technology awards

#### 简介

- 国家科学技术奖包括：
- 国家自然科学奖(the State Natural Science Award)
- 国家技术发明奖(the State Technological Innovation Award)
- 国家科技进步奖(the State Science and Technology Advancement Award)。
- 还包括：
- 授予外籍科学家或外国组织的中华人民共和国国际科学技术合作奖(the International Science and Technology Cooperation Award),
- 分量最重的国家最高科学技术奖 (State Preeminent Science and Technology Award)



### 国家科学技术奖

The State Science and Technology Award



#### 国家最高科学技术奖 The State Preeminent Science and Technology Award

每年授予至多2人，表彰在科学技术领域作出卓著贡献的科学家。  
Award annually to up to two scientists for outstanding contributions to the field of science and technology.



#### 国家自然科学奖 The State Natural Science Award

奖励在基础研究和应用基础研究中取得重大科学发现的研究人员。  
To reward researchers who have made significant scientific discoveries in basic and applied basic research.



#### 国家技术发明奖 The State Technological Innovation Award

旨在鼓励在技术发明方面有重大创新的个人或团队。  
To encourage individuals or teams with significant innovations in technological inventions.



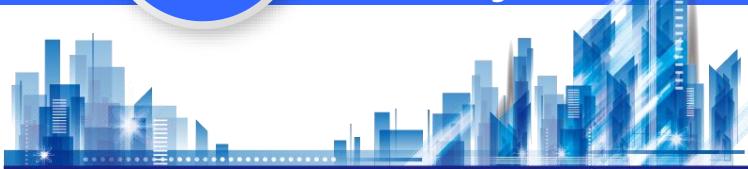
#### 国家科学技术进步奖 The State Science and Technology Advancement Award

表彰在技术研究、技术开发等方面作出创造性贡献的集体和个人。  
Recognition of collectives and individuals who have made creative contributions to technological research, technological development, etc.

国际科学技术合作奖(the International Science and Technology Cooperation Award)

## 02

### 中国科技发展的成果 Achievements in China's scientific and technological development



#### 中国科技发展的新成果

#### New achievements in China's scientific and technological development

C919大飞机是中国自主研制的新一代喷气式干线客机，最大载客人数174人，最大航程超过5000公里，与波音737、空客320相当。2008年正式立项，2015年首架机完成总装下线。

The C919 is a new generation of mainline passenger jet independently developed by China. It has a maximum capacity of 174 passengers and a maximum range of more than 5,000 kilometers, which is similar to the Boeing 737 and Airbus 320. The project was officially launched in 2008 and the first aircraft completed assembly production in 2015.

China's first self-developed narrow-body jet, the C919, successfully completed its maiden commercial flight on Sunday, ushering in a new era of aviation that utilizes domestically manufactured aircraft. Some 130 passengers traveled on China Eastern Airlines flight MU 9191, which departed Shanghai Hongqiao International Airport at 10:32 am. The plane landed at Beijing Capital International Airport at 12:31 pm, and was welcomed with a traditional water salute.

1 JUNE 2023



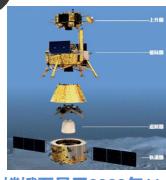
商业首航成功！C919大型客机顺利抵达北京首都国际机场

#### 中国科技发展的新成果

#### New achievements in China's scientific and technological development



China's lunar exploration program

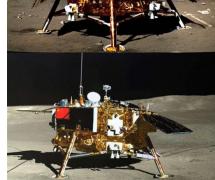


嫦娥五号于2020年11月发射。任务完成后，将为载人登月打下良好的技术基础。

The lunar probe is composed of four parts: an ascender, a lander, an orbiter and a returner.

After being captured by the Moon's gravity, the spacecraft will enter the lunar orbit, which is about 200 kilometers from the Moon. Later on, the mission will be divided into two parts: the orbiter and the returner will stay in the lunar orbit, while the ascender and the lander will head to the Moon.

There are three new features of the Chang'e-5 mission: a brand-new probe, a new Long March 5 rocket, and a new launch site.



在移动通信、北斗导航为代表的一批重大科技成果；在电力、交通、冶金、先进制造等领域的技术突破，不仅创造了巨大的经济效益，更参与了世界产业格局发展，成为中国创新驱动发展的成功范例。

A number of major scientific and technological achievements represented by mobile communications and Beidou Navigation; Technological breakthroughs in electric power, transportation, metallurgy, advanced manufacturing and other fields have not only created huge economic benefits, but also participated in the development of the world industrial pattern, becoming a successful example of China's innovation-driven development.



#### 中国科技发展的新成果

#### New achievements in China's scientific and technological development

2021年10月16日，搭载神舟十三号载人飞船的长征二号F遥十三运载火箭，在酒泉卫星发射中心按照预定时间精准点火发射。

神舟十三号载人飞船入轨后顺利完成入轨状态设置，于北京时间2021年10月16日6时56分，采用自主快速交会对接模式成功对接于天和核心舱径向端口，与此前已对接的天舟二号、天舟三号货运飞船一起构成四舱（船）组合体，整个交会对接过程历时约6.5小时。

3名航天员随后从神舟十三号载人飞船进入天和核心舱。

Shenzhou XIII spacecraft was lifted by a Long March 2F carrier rocket that blasted off at 12:23 am 16 Oct 2021 at the Jiuquan Satellite Launch Center in northwestern China's Gobi Desert.

The mission is expected to become the longest crewed spaceflight by China, doubling the time spent in the Shenzhou XII mission. It will also see the first spacewalk by a Chinese woman.

One of China's most challenging and sophisticated space endeavors, Tiangong will eventually consist of three main components - the Tianhe core module attached to two large space labs - with a combined weight of nearly 70 metric tons. The entire station is set to operate for about 15 years in a low-Earth orbit about 400 kilometers above the planet.

China's Shenzhou XIII crewed spacecraft docked with the Tiangong space station on Oct. 16, with astronauts ready to enter the station to start a six-month journey.



#### 中国科技发展的新成果

#### New achievements in China's scientific and technological development

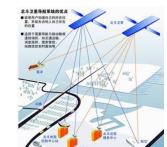
中国探月  
CLEP

#### 中国科技发展的新成果

#### New achievements in China's scientific and technological development

中国的北斗导航卫星，定位信号强，误差小，名气也传到了丝路沿线。泰国公主诗琳通访华时提出：“泰国总下雨，能不能搞一个下雨天也能用的卫星？”一句“天问”，促成了2013年中泰北斗导航应用项目合作。

China's Beidou navigation satellite, with its strong positioning signal and small error, has become famous along the Silk Road. During her visit to China, Princess Maha Chakri Sirindhorn of Thailand asked, "It always rains in Thailand. Can we build a satellite that can be used even in rainy days?" This "heavenly question" contributed to the cooperation between China and Thailand on the Beidou Navigation Application project in 2013.



## 发动科技创新的强大引擎 A powerful engine for scientific and technological innovation



以联想、华为、海尔为代表的第一代已经走向世界

The first generation has gone global

以腾讯、百度为代表的第二代正在参与改变世界

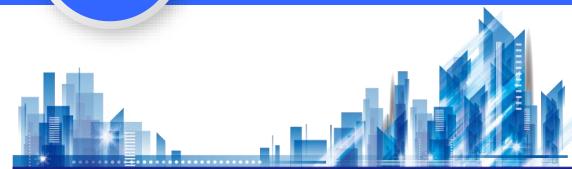
The second generation is participating in changing the world

以小米、大疆等为代表的第三代独角兽企业，也研发出诸多跨界融合的新成果

The third generation of unicorn companies have also developed many new achievements in cross-border integration

03

## 科技让我们的生活更美好 Technology makes our life better



### 科技让我们的生活更美好 Technology makes our life better



### 科技让我们的生活更美好 Technology makes our life better

具有完全自主知识产权、达到世界先进水平的中国标准动车组  
A Chinese-standard EMU with fully independent intellectual property rights that has reached the world's advanced level



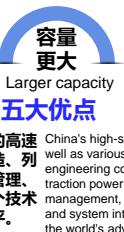
寿命更长

Longer life



身材更好

Better figure



容量更大

#### “复兴号”五大优点

以中国标准动车组为代表的高速动车组技术，以及工程建造、列车控制、牵引供电、运营管理、风险防控、系统集成等各个技术领域，均达到世界先进水平。

China's high-speed EMU technology, as well as various technical fields such as engineering construction, train control, traction power supply, operation management, risk prevention and control, and system integration, have all reached the world's advanced level.

Higher comfort level

舒适度更高

Higher security

警惕性更高

### 科技让我们的生活更美好 Technology makes our life better



会做各种事的无人机  
UAV



无人机能携带沉重的专业摄影器材航拍、能够低空喷洒农药

### 科技让我们的生活更美好 Technology makes our life better

New Energy Bus in Beijing

2020年末,北京运营公交车辆23004辆,新能源车比例为57.2%,比“十二五”末提升了46个百分点。  
2023年,北京公交车中新能源和清洁能源车辆占比达94%,巡游出租车中纯电动占比65%。



比亚迪新能源车全球足迹

遍布6大洲的200多个城市

Global footprint of BYD new energy vehicles  
More than 200 cities on six continents



<https://www.chinaservicesinfo.com/s/202312/27/WS65960390498ed2d7b7ea4386/how-china-works-chinese-news-going-global.html>



### •什么是超算?

•超级计算机是指由数千甚至更多处理器组成、能计算普通计算机和服务器不能完成的大型复杂课题的计算机，被誉为“计算机中的珠穆朗玛峰”。

### •超算能算啥?

•超算是解决国家经济建设、社会发展、国防建设等领域重大战略性问题的重要手段，已成为世界各国争夺的一个战略制高点。

•借助超算，可以解决在交通工具制造、气候问题、生物信息、地震监测、地球科学、天体物理、公共健康、材料科学、人类/组织系统研究等领域的挑战性问题。

•What is a supercomputer?

•A supercomputer is a computer with thousands or more processors that can perform large and complex tasks that ordinary computers and servers cannot. It is known as the "Mount Everest of computers".



### 超级计算机前五排名 TOP 5

ten to the 16th power 1051000000000000次/秒	
1	日本富岳 (Fugaku)
2	Summit, 美国IBM
3	Sierra, 美国劳伦斯
4	Sunway TaihuLight(太湖神威)
5	Perlmutter , 美国

Supercomputers are mainly characterized by two aspects: huge data storage capacity and extremely fast data processing speed.

### 对经济发展的影响 Impact on Economic Development



创新驱动增长  
Innovation-driven growth

科技创新作为经济增长的新引擎，推动产业结构优化升级，提高全要素生产率，助力中国经济迈向高质量发展阶段。

Science and technology innovation, as a new engine of economic growth, promotes the optimization and upgrading of industrial structure, improves total factor productivity, and helps China's economy move towards the stage of high-quality development.



新兴产业崛起  
The rise of emerging industries

新兴科技产业如信息技术、生物医药、新能源等快速发展，成为经济增长的新动力，带动就业和消费，形成新的经济增长点。

The rapid development of emerging science and technology industries, such as information technology, biomedicine and new energy, has become a new driving force for economic growth, boosting employment and consumption and creating new points of economic growth.



传统产业升级  
Upgrading of traditional industries

通过科技赋能，传统产业实现智能化、绿色化转型，提升产品附加值和市场竞争力，促进经济结构更加均衡和可持续。

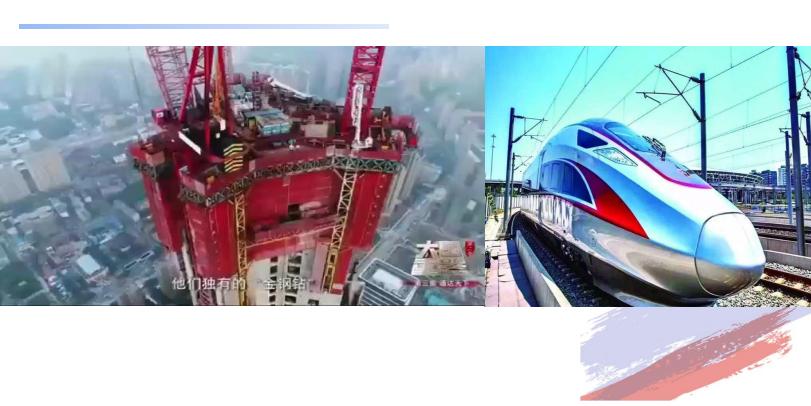
Empowered by science and technology, traditional industries realize intelligent and green transformation, enhance product value-added and market competitiveness, and promote a more balanced and sustainable economic structure.

03

## 科技与先进制造业 Science & technology and advanced manufacturing



<https://www.chinadaily.com.cn/a/202306/11/WS6484f457a31033ad3f7bb90d.html>



## 人工智能的崛起

### The Rise of Artificial Intelligence

#### AI技术发展现状 Current status of AI technology development

中国在算法优化、机器学习平台等方面成绩斐然，AI专利申请量持续攀升，展现出强大的创新活力。China has made remarkable achievements in algorithm optimization and machine learning platforms, and the number of AI patent applications continues to climb, demonstrating strong innovation vitality.

#### AI赋能行业变革 AI empowers industry change

从医疗健康到金融服务，AI正深度融入各行各业，推动效率提升与模式创新，尤其在医疗诊断中展现巨大潜力。From healthcare to financial services, AI is deeply integrating into various industries, promoting efficiency improvement and model innovation, especially in medical diagnosis, showing great potential.

#### AI伦理与治理 AI ethics and governance

面对AI发展带来的隐私保护与责任界定挑战，中国积极探索平衡技术创新与社会伦理的路径，引领负责任的AI发展。In the face of the challenges of privacy protection and responsibility definition brought about by AI development, China is actively exploring the path of balancing technological innovation and social ethics to lead the development of responsible AI.

#### 案例研究：AI医疗应用 Case study: AI medical applications

通过AI辅助诊断系统，医生能够更精准地识别疾病，提高诊疗效率，改善患者预后，展现科技向善的力量。Through the AI-assisted diagnostic system, doctors are able to identify diseases more accurately, improve diagnostic and treatment efficiency, improve patient prognosis, and demonstrate the power of science and technology for good.

<https://haokan.baidu.com/v?vid=3346080355537398085>

## 新能源技术与可持续发展

### New energy technologies and sustainable development

#### 比亚迪电动汽车

BYD Electric Vehicles

#### 新疆哈密风电基地

Xinjiang Hami Wind Power Base

#### 光伏产业崛起

The Rise of the Photovoltaic Industry

#### 储能技术突破

Breakthroughs in Energy Storage Technology

全球领先制造商，推动绿色出行革命，展现新能源汽车实力。

Leading global manufacturer, promoting green mobility revolution and demonstrating the strength of new energy vehicles.

中国最大风电项目，彰显风能利用潜力，助力可持续能源转型。China's largest wind power project, highlighting the potential of wind energy utilization and contributing to the sustainable energy transition.

中国光伏企业通过技术创新驱动成本下降，普及清洁能源。Chinese PV companies are driving down costs and popularizing clean energy through technological innovation.

研发高性能电池系统，解决新能源间歇性问题，保障电网稳定运行。Research and development of high-performance battery system to solve the problem of intermittency of new energy and ensure stable operation of the power grid.

## 清洁环保战略

### Cleaner Environmental Protection Strategy (CEPS)

#### 绿色能源转型

#### Green Energy Transition

## 污染治理成效 Pollution control effectiveness

实施大气污染防治、水土保持等措施，有效改善环境质量，蓝天保卫战成果显著。

The implementation of air pollution prevention and control, soil and water conservation and other measures has effectively improved environmental quality, and the results of the battle for blue skies have been remarkable.

#### 循环经济实践 Circular economy in practice

推广资源回收利用，倡导低碳生产模式，实现经济发展与环境保护双赢。

Promote resource recycling, advocate low-carbon production patterns, and realize a win-win situation for economic development and environmental protection.

#### 国际合作参与 Participation in international cooperation

积极参与联合国气候变化框架公约，开展双边合作，共促全球环境治理。

Actively participate in the United Nations Framework Convention on Climate Change and engage in bilateral cooperation to promote global environmental governance.

## 生物技术与健康医疗

### Biotechnology and Healthcare



#### 基因编辑技术

Gene editing technology  
中国在CRISPR-Cas9等基因编辑技术上取得重要进展，为遗传病治疗开辟新路径。China has made important progress in gene-editing technologies such as CRISPR-Cas9, opening up new paths for genetic disease treatment.



#### 远程医疗服务

Telemedicine services  
5G技术和云计算赋能远程医疗服务，提升医疗效率，尤其在偏远地区效果显著。5G technology and cloud computing empowers remote medical services and improves medical efficiency, especially effective in remote areas.



#### 医疗设备创新

Medical Device Innovation  
高端医疗设备如CT、MRI等性能卓越，惠及更多患者。High-end medical equipment such as CT, MRI, etc. have excellent performance, benefiting more patients.

## 科技与制造业

### Technology and Manufacturing

- 制造业是实体经济的主体，是富国之基、强国之本，是国家安全和人民幸福安康的物质基础，是经济“创新驱动，转型升级”的主战场。
- Manufacturing is the mainstay of the real economy, the foundation for a rich country and a strong country, the material foundation for national security and people's happiness and well-being, and the main battlefield for economic "innovation-driven, transformation and upgrading".

# 科技与制造业

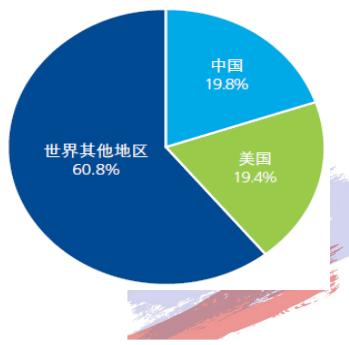
## Technology and Manufacturing

规模：世界第一制造大国。

Scale: The world's largest manufacturer.

据世界银行的数据：2012年中国制造业工业增加值达到2.08万亿美元（现价），美国为1.91万亿美元（现价），成为全球制造业大国。

According to the data of the World Bank: in 2012, the added value of China's manufacturing industry reached \$2.08 trillion, while that of the United States was \$1.91 trillion, making China a global manufacturing power.



出口：世界第一制成品出口大国。

Exports: the world's largest exporter of manufactured goods.

2013年，中国制成品出口额20771.504亿美元，占世界制成品出口额的17.53%，居世界第一，是排名第二的德国的1.68倍。

In 2013, China's exports of manufactured goods reached US \$207,715.04 billion, accounting for 17.53% of the world's exports of manufactured goods, ranking first in the world and 1.68 times that of Germany, which ranked second.

1980年，中国制成品出口额居世界第21位，占世界制成品出口额的0.80%，相当于排名第一的德国的5.38%。

In 1980, China's exports of manufactured goods ranked 21st in the world, accounting for 0.80 percent of the world's exports of manufactured goods, equivalent to the first ranked Germany's 5.38 percent.

创新：创新能力持续增强。

Innovation capacity continues to increase.

2012年中国R&D强度为1.98%。虽然与美、日、德等传统制造业强国仍有较大差距，但已经超过英、意等发达国家以及平均水平1.97%的欧盟28国。

China's R&D intensity was 1.98% in 2012. Although there is still a big gap with the United States, Japan, Germany and other traditional manufacturing powers, but it has exceeded the United Kingdom, Italy and other developed countries and the average level of 1.97% of the 28 EU countries.

中国研发经费达到10298.4亿元，稳居世界第3位，研发产出和创新能力快速提高，一大批重大技术和装备实现重大突破。

China's R&D spending reached 1,029.84 billion yuan, ranking third in the world. China's R&D output and innovation capacity increased rapidly, and major breakthroughs were made in a large number of major technologies and equipment.

### 中国制造业面临的问题

- The current problems facing China's manufacturing industry

中国已是制造大国，但仍然存在一些结构化的问题。

目前制造业的总体规模巨大，部分产业产能过剩和重复建设问题突出，资源、能源、环境和市场的约束成为中国制造业发展的主要制约因素。中国制造业正在由制造大国向高质量发展转变的新的历史发展阶段。

China has become a manufacturing power, but there are still some structural problems.

At present, the overall scale of the manufacturing industry is huge, and the problems of overcapacity and repetitive construction are prominent in some industries. The constraints of resources, energy, environment and market have become the main constraints for the development of China's manufacturing industry. China's manufacturing industry is in a new historical stage of transformation from a manufacturing power to high-quality development.

## 总体思路

### General thoughts

#### • 挑战和机遇

#### • Challenges and opportunities

新工业革命正在孕育兴起，将重塑全球经济结构和竞争格局，这是极大的挑战。以数字化智能化制造技术应用为重点，必须依靠科技创新，才能构建更多的未来发展的主动权。

The new industrial revolution is in the making and will reshape the global economic structure and competitive landscape. This is a great challenge. To focus on the application of digital intelligent manufacturing technology, we must rely on scientific and technological innovation to build more initiatives for future development.

#### • 四项原则：

- ✓ 市场主导、政府引导；
- ✓ 立足当前，着眼长远；
- ✓ 整体推进、重点突破；
- ✓ 自主发展和开放合作。

Four principles:

Market leadership and government guidance;  
Based on the present, look at the long-term;  
Overall promotion, key breakthroughs;  
Independent development and open cooperation.

#### 五条方针：

- ✓ 创新驱动； Innovation-driven;
- ✓ 质量为先； Quality first;
- ✓ 绿色发展； Green development;
- ✓ 结构优化； Structural optimization;
- ✓ 人才为本。 Talent is the foundation.

## “五大工程”

"Five Major Projects"

### 五大工程:

✓ 国家制造业创新中心建设工程

✓ 智能制造工程

✓ 工业强基工程

✓ 绿色制造工程

✓ 高端装备创新工程



✓ National Manufacturing Innovation Center construction Project

✓ Intelligent manufacturing Engineering

✓ Industrial strong foundation project

✓ Green Manufacturing Engineering

✓ Frontier equipment innovation project

## “九大任务”

The Nine Tasks

### 提高国家制造业创新能力

1

- 加强关键核心技术研发
- 提高创新设计能力
- 推进科技成果产业化
- 完善国家制造业创新体系
- 加强标准体系建设
- 强化知识产权运用

Improve the country's manufacturing innovation capacity

Further integrate IT and industrialization

### 推进信息化与工业化深度融合

2

- 研究制定智能制造发展战略
- 加快发展智能制造装备和产品
- 推进制造过程智能化
- 深化互联网在制造领域的应用
- 加强互联网基础设施建设

### Strengthen basic industrial capabilities

#### 强化工业基础能力

- 统筹推进“四基”发展
- 加强“四基”创新能力建设
- 推动整机企业和“四基”企业协同发展

#### 全面推进绿色制造

- 加快制造业绿色改造升级
- 推进资源高效循环利用
- 积极构建绿色制造体系

Comprehensively promote green manufacturing

### 加强质量品牌建设

#### 加强质量品牌建设

- 推广先进质量管理技术和方法
- 加快提升产品质量
- 完善质量监管体系
- 努实质量发展基础
- 推进制造业品牌建设

### 大力推动重点领域突破发展

- 新一代信息技术产业
- 海洋数控机床和机器人
- 新型显示器件
- 海洋工程装备及高技术船舶
- 先进轨道交通装备
- 节能与新能源汽车
- 电力装备
- 农机装备
- 新材料
- 生物医药及高性能医疗器械

Promoted breakthroughs in key areas

### Deepen restructuring of the manufacturing sector

#### 深入推进制造业结构调整

- 持续推进企业技术改造
- 稳步化解产能过剩矛盾
- 促进大中小企业协调发展
- 优化制造业发展布局

#### 积极发展服务型制造和生产性服务业

- 推动发展服务型制造
- 加快生产性服务业发展
- 强化服务功能区和公共服务平台建设

#### Actively develop service-based manufacturing and producer services

### 提高制造业国际化发展水平

- 提高利用外资与国际合作水平
- 提升跨国经营能力和国际竞争力
- 深化产业国际合作，加快企业“走出去”

## ◆ 智能制造技术创新的内涵：

### ◆ The connotation of intelligent manufacturing technology innovation:

- 产品智能化--指将数字化网络化智能化技术有效融合进机械产品，从而使产品功能极大丰富，性能发生质的变化，从根本上提高产品的水平和市场竞争力，并使机械产品向智能化方向发展。
- 制造技术智能化--将数字化网络化智能化技术有效融合进制造技术，以全面提升产品设计、加工和管理水平。
- 产业模式智能化--以数字化技术为基础，在互联网、物联网、云计算、大数据等技术的强力支持下，推进产业型服务业全面而快速发展，推进企业走向“产品+服务”的模式，从产品制造商向系统集成和服务商转变。
- Product intelligence - refers to the effective integration of digital and networked intelligent technology into mechanical products, so as to greatly enrich product functions, qualitative changes in performance, fundamentally improve the level of products and market competitiveness, and make mechanical products to the direction of intelligent development.
- Intelligent manufacturing technology -- digital and networked intelligent technology is effectively integrated into manufacturing technology to comprehensively improve product design, processing and management level.
- Intelligent industrial model -- Based on digital technology, with the strong support of Internet, Internet of Things, cloud computing, big data and other technologies, promote the comprehensive and rapid development of production service industry, promote the enterprise to the "product + service" model, from product manufacturers to system integration and service providers.

## 创新驱动

Innovation Driven

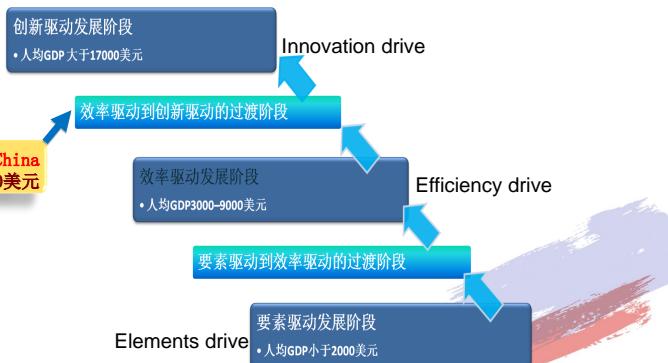
创新驱动就是把高科技和知识作为最重要的资源，通过市场化、网络化实现科技与经济的一体化，形成产业聚集，从而推动经济发展。

创新驱动发展，本质上就是依靠自主创新，充分发挥科技的支撑和引领作用，实现科学发展、全面协调可持续发展。

Innovation drive is to take high technology and knowledge as the most important resources, realize the integration of science and technology and economy through marketization and networking, form industrial aggregation, and promote economic development.

Innovation-driven development, in essence, is to rely on independent innovation, give full play to the supporting and guiding role of science and technology, and achieve scientific, comprehensive, balanced and sustainable development.

# 创新驱动 Innovation Driven



## 三个阶段的主要特点



## 创新驱动是大势所趋

Innovation-driven development is the trend of The Times

一是传统增长模式难以为继。

主要依靠投资和出口拉动，依靠物质资源消耗和劳动力投入、引进技术装备生产的经济增长模式，不再有效。

竞争是五低：低成本、低技术、低价格、低利润、低端市场。

代价是四高：高能耗、高物耗、高排放、高污染。

单位国内生产总值（GDP）能耗高；单位资源产出水平不足。

The traditional growth model is unsustainable.

The economic growth model that relies mainly on investment and exports, consumption of material resources, input of labor and production of imported technology and equipment is no longer effective.

Competition is five low: low cost, low technology, low price, low profit, low-end market.

The cost is four high: high energy consumption, high material consumption, high emissions, high pollution.

High energy consumption per unit of GDP; Inadequate level of output per unit of resource.

虽能快速提升GDP，却无法创造高利润，  
虽可大量生产商品，却无法创造品牌，  
虽可吸纳大量就业人口，却无法大幅提高劳动者的收入。

They can boost GDP quickly, but they can't generate high profits,

They can churn out goods but they can't create brands,

Although it can absorb a large number of employment population, but can not significantly increase the income of workers.

**发展要求：**以规模扩张为主导的粗放式增长，  
转为以质量效益为主导的可持续发展；  
**发展动力：**土地、资本等传统要素主导发展，  
转为科技、人才等创新要素主导发展。

Development requirements: extensive growth led by scale expansion, to sustainable development led by quality and efficiency;

Driving force for development: Traditional factors such as land and capital dominate development, while innovative factors such as science and technology and talents dominate development.

## 二是转型升级的迫切要求

宏观：经济转型升级

由主要依靠投资、出口拉动向依靠消费、出口协调拉动转变，由主要依靠第二产业带动向依靠三次产业协同带动转变，

由主要依靠增加物质资源消耗向主要依靠科技进步、劳动者素质提高和管理创新转变。

**The urgent need for transformation and upgrading**

**Macroscopic perspective:** Economic transformation and upgrading

From mainly relying on investment and export to relying on consumption and export coordination, from mainly relying on secondary industry to relying on the coordination of the three industries to drive the transformation,

From relying mainly on increased consumption of material resources to relying mainly on scientific and technological progress, improving the quality of the workforce and innovating management.

## 中观：产业转型升级

历史上，发达国家的产业演进几乎都经历了

劳动密集型产业→

资本密集型产业→

技术密集型产业的发展过程，结果成功地实现了产业的升级和经济的发展。  
这是产业发展的一般规律和成功经验。

### Meso-scopic perspective: Industrial transformation and upgrading

Historically, the industrial evolution of developed countries has almost all experienced

Labor-intensive industries →

Capital intensive industries →

The development process of technology-intensive industries has successfully achieved industrial upgrading and economic development as a result.

This is the general rule of industrial development and successful experience.

## 微观:企业转型升级

1. 流程升级。流程的升级就是工艺的改造、新技术的引进。

2. 产品升级。指产品档次的提高，不断推出新品种和新款式。

如电视机向着“超大、超薄、超轻、高清晰度”方向发展。

**Microscopic perspective:** enterprise transformation and upgrading

1. Process upgrade. The upgrade of the process is the transformation of technology, the introduction of new technology.

2. Product upgrade. Refers to the improvement of product grade, and constantly introduce new varieties and new styles.

For example, television toward "large, ultra thin, ultra light, high definition" direction development.

### 3. 功能升级，即从生产环节向设计和营销等利润丰厚的环节跃迁。

如由委托加工的“贴牌生产”到自主设计加工再到自主品牌生产的转变。

### 4. 价值链升级，即从一条价值链跨越到另一条获利能力更高的价值链。

如从生产电视机显像管转向生产计算机监视器。

3. Functional upgrading, a jump from production to lucrative areas such as design and marketing.

For example, from the commissioned processing of "OEM production" to independent design processing and then to the transformation of independent brand production.

4. Value chain upgrading, that is, jumping from one value chain to another value chain with higher profitability.

For example, from television tubes to computer monitors.

## McKinsey: Disruptive technologies shaping the future 麦肯锡（2013）：影响未来的颠覆性技术

- |             |               |
|-------------|---------------|
| 1. 移动互联网。   | 7. 下一代基因组学。   |
| 2. 知识工作自动化。 | 8. 储能技术。      |
| 3. 物联网。     | 9. 3D打印。      |
| 4. 云技术。     | 10. 先进材料。     |
| 5. 先进机器人。   | 11. 先进油气勘探开采。 |
| 6. 自动驾驶汽车。  | 12. 可再生能源。    |

Mobile Internet

Automation of knowledge work

The Internet of things

Cloud Computing

Advanced robot

Self-driving car

Next-generation genomics

Energy storage technology

3D printing

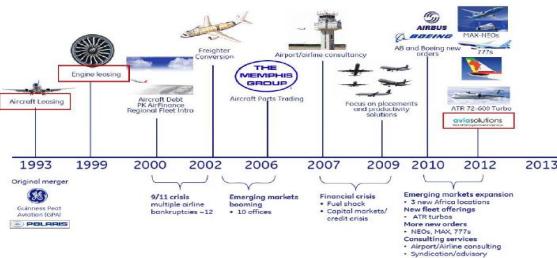
Advanced materials

Advanced oil and gas exploration and exploitation

Renewable energy

从1991年到2009年，GE开展“按小时支付”等商业服务模式，飞机发动机业务从年收入69亿美元增长到187亿美元，服务业的收入比例则从1994年的不足40%到2000年的60%以上。

From 1991 to 2009, GE carried out the business service model such as "pay by the hour". The aircraft engine business grew from 6.9 billion US dollars to 18.7 billion US dollars in annual revenue, while the proportion of service revenue increased from less than 40% in 1994 to more than 60% in 2000.



新模式不断涌现。产业链、整合、跨界、解决方案、增值服务。

New models are emerging. Industrial chain, integration, cross-border, solutions, value-added services.

新业态快速兴起。业态混合是当代经济发展最核心的内容。由此新的业态快速形成，平台经济、体验型经济、定制经济等迅速发展。

New forms of business are emerging rapidly. The mix of business forms is the core content of contemporary economic development. As a result, new forms of business form rapidly, platform economy, experience economy, customized economy and other rapid development.

新科技革命和产业变革将**重塑全球经济结构**，就像体育比赛换到了一个**新场地**，如果我们还留在原来的场地，那就跟不上趟了。紧紧抓住和用好新一轮科技革命和产业变革的机遇，**不能等待、不能观望、不能懈怠**。

The new technological and industrial revolutions will **reshape the global economy**, just as a sports event moves to **a new field**, and we can't keep up if we stay on the same field.

We must seize and make full use of the opportunities presented by the new round of scientific and technological revolution and industrial transformation. We must not wait, wait, or slack off.

**一是从产业变革大趋势寻求突破。**

要在全球产业变革的大趋势中寻找突破，全球技术变革、新一轮全球化、互联网经济、服务型经济等。

**“云上贵州”。“云端中卫”**

First, seek breakthroughs in the general trend of industrial transformation.

We should seek breakthroughs in the general trend of global industrial transformation, such as global technological transformation, a new round of globalization, Internet economy and service economy.



**二是突破传统结构框架。农业、制造业、服务型制造。跨界。**

大庆-14%、阜新-17%、锦州-6.44%、嘉峪关-31%。

**三是突破传统发展模式。走出项目主导，规模（产能）至上。发展的空间存在于个性化定制等模式。**

Second, break through the traditional structural framework. Agriculture, manufacturing. Service manufacturing. Crossover.

Daqing -14%, Fuxin -17%, Jinzhou -6.44%, Jiayuguan -31%.

Third, we need to break through the traditional development model. Out of the project leading, scale (capacity) first.

The development space exists in the personalized customization mode.

## (二) 发展创新型经济

### Developing an innovative economy

**创新型经济。创新经济讲的是新的技术、新的产品、新的经营模式和新的业态构成的新的经济。**

**当代经济发展是业态模式创新引领。不唯技术。**

An innovative economy. Innovation economy refers to a new economy composed of new technologies, new products, new business models and new forms of business.

Contemporary economic development is driven by the innovation of business models. Not just technology.

**信息产业领域：**以智能、泛在、融合和普适为特征的新一轮信息技术，推动新一代网络、大数据、云计算、物联网等快速发展。

在生产经营、经济运行、城市管理、社会服务等领域具有广阔的应用空间。

**智能电网、智慧城市、智能制造、智能交通、农业农村和医疗信息化的迅速发展。**

**Information industry:** a new round of information technology characterized by intelligence, ubiquity, convergence and universality promotes the rapid development of the new generation of networks, big data, cloud computing and the Internet of Things.

It has broad application space in production and operation, economic operation, urban management, social service and other fields.

Smart power grids, smart cities, intelligent manufacturing, intelligent transportation, agriculture, rural areas and medical informatization are developing rapidly.

**生物产业领域：**生物技术不断取得突破，在解决人类健康、资源、环境等重大问题方面发挥着越来越重要的作用。

安全可控农业生物技术，将极大地提高育种效率和增粮潜力；

基因治疗水平不断提高，为预防幼儿耳聋、癌症等重大疾病提供了有效手段。

**生物农业、生物药业、生物能源、生物环保、生物制造展示极大前景。**

**Biological industry:** Biotechnology is making breakthroughs and playing an increasingly important role in solving major problems such as human health, resources and environment.

Safe and controllable agricultural biotechnology will greatly improve breeding efficiency and food potential;

The level of gene therapy is improving continuously, providing an effective means for preventing children's deafness, cancer and other major diseases.

Biological agriculture, biological medicine, biological energy, biological environmental protection, biological manufacturing show great prospects.

**新能源领域:** 高效、清洁、低碳、低成本、可持续能源技术不断突破。

太阳能、风能、生物能、核能、氢能等新能源快速发展，推动世界由化石能源为基础的能源体系向**分布式、智能化、绿色新能源体系**转型发展。

欧盟预计，2030年风能、太阳能等可再生能源及核能在世界总能源结构中将占到30%以上。

北欧国家2050年告别化石能源。

**New energy:** efficient, clean, low-carbon, low-cost and sustainable energy technologies continue to make breakthroughs.

The rapid development of solar, wind, biological, nuclear, hydrogen and other new energy sources is promoting the transformation of the world from a fossil-based energy system to a distributed, intelligent and green new energy system.

The European Union expects renewables such as wind and solar and nuclear power to account for more than 30 percent of the world's energy mix by 2030.

Nordic countries to move away from fossil fuels by 2050.



**先进制造领域:** 制造技术处于从传统技术向**绿色化、数字化、智能化和系统化**技术时代迈进阶段，**智能化**成为重要方向。

智能机器人、3D打印制造等智能制造快速发展，将改变制造业的面貌。

Advanced manufacturing: manufacturing technology is in the stage from traditional technology to green, digital, intelligent and systematic technology era, intelligent has become an important direction.

The rapid development of intelligent manufacturing such as intelligent robot and 3D printing manufacturing will change the face of manufacturing industry.

## “互联网”开启了创新的崭新天地

The Internet has opened up a whole new world of innovation



## 产业转型是技术、模式、管理的全面转型

Industrial transformation is a comprehensive transformation of technology, mode and management. Quantity adjustment, technology transformation, mode of production, mode of investment, business model & format transformation.

The impact of the Internet on traditional enterprises is not only channel transfer, but also fundamental, conceptual and systematic. From product innovation, technology iteration, communication mode, talent structure, capital raising and even organizational system, all of them are facing **reconstruction and remodeling**.

数量调整，技术转型，生产方式，投资方式，商业模式，业态转型。

互联网对传统企业造成的冲击，绝不仅仅是渠道转移这一环，它是根本性的、是观念性的以及系统性的，从产品创新、技术迭代、传播模式、人才结构、资本募集乃至组织体系，无一不面临**再造与重塑**。

### 循环经济示范项目 Circular economy demonstration projects

推动资源高效利用，实现产业绿色转型，打造可持续发展模式。  
Promoting the efficient use of resources, realizing the green transformation of industries and creating a sustainable development model.

### 绿色供应链管理 Green supply chain management

优化供应链流程，减少环境影响，提升整体生态效益。  
Optimizing supply chain processes to reduce environmental impact and enhance overall eco-efficiency.

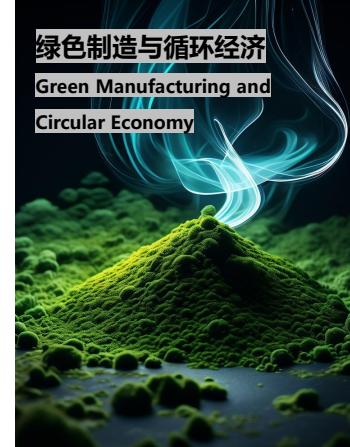
### 环保材料创新 Innovations in environmentally friendly materials

研发可降解、低能耗材料，降低生产过程中的碳足迹。  
Developing biodegradable and low-energy materials to reduce the carbon footprint of the production process.

### 废弃物资源化利用 Waste resource utilization

将工业废弃物转化为再生资源，形成闭环生产体系。  
Converting industrial waste into renewable resources to form a closed-loop production system.

## 绿色制造与循环经济 Green Manufacturing and Circular Economy



# 国际学生参与中国科技创新的机会

## Opportunities for International Students to Participate in Science and Technology Innovation in China

### 加入科研项目 Join the Research Program

国家重点实验室  
(university laboratories in PRC supported by the central government)

科研团队申请  
Research Team Application

校企合作项目  
School-Enterprise Cooperation Program

科研资源丰富  
Abundant Research Resources

国家重点实验室欢迎国际学生，提供前沿科研环境，共同探索科技奥秘。

The State Key Laboratory welcomes international students and provides a cutting-edge research environment to explore the mysteries of science and technology.

申请加入科研团队，直接参与项目，参与校企合作，解决实际问题，理体验中国科研氛围，提升科研能力。Apply to join the research team, participate in projects directly, experience China's research atmosphere and improve your research ability.

享受丰富科研资源，包括设备、资料和专家指导，加速科研成果产出。Enjoy abundant research resources, including equipment, materials and expert guidance, to accelerate the output of research results.

### 实习与就业机会 Internship and Employment Opportunities

中国企业实习项目  
Internship Program in Chinese Companies

毕业后留华工作  
Stay and work in China after graduation

工作签证支持  
Work Visa Support

行业前沿体验  
Cutting-edge industry experience

在科技、金融、咨询等行业，国际学生可获得宝贵实践经验，深入了解中国商业环境。International students will gain valuable hands-on experience in technology, finance, consulting and other industries, and gain insight into the Chinese business environment.

符合条件的毕业生有机会在中国企业工作，享受多元文化的工作氛围，拓展职业发展路径。Qualified graduates have the opportunity to work in a Chinese company, enjoying a multicultural working atmosphere and expanding their career path.

中国政府提供工作签证便利，鼓励国际人才留华，为科技创新注入新鲜血液。The Chinese government offers work visa facilities to encourage international talents to stay in China, injecting fresh blood into science and technology innovation.

### 参加科技创新大赛

#### Participation in the Science and Technology Innovation Competition

01 中国国际大学生创新大赛 China International College Students' Innovation Competition	02 挑战杯全国大学生课外学术科技作品竞赛 The Challenge Cup National Extracurricular Academic and Technological Works Competition for College Students	03 赛事价值 Value of the competitions	04 参与意义 The significance of participation
<p>教育部等多部门联合主办，聚焦科技创新，鼓励国际学生参与，展示创新思维与实践能力。</p> <p>Co-organized by the Ministry of Education and other departments, focusing on science and technology innovation, encouraging the participation of international students, and demonstrating innovative thinking and practical ability.</p>	<p>面向全国高校学生，涵盖科技、学术等领域，是展示研究成果、提升创新能力的重要平台。</p> <p>An important platform for displaying research results and enhancing innovation ability for students of universities across China, covering the fields of science and technology, academics and so on.</p>	<p>不仅提供展示舞台，更有机会获得资金支持、导师指导，促进项目孵化与发展。</p> <p>It not only provides a stage for display, but also the opportunity to obtain financial support, mentorship and guidance to promote project incubation and development.</p>	<p>增强跨文化交流，拓宽国际视野，为未来职业生涯奠定坚实基础。</p> <p>Enhance cross-cultural communication, broaden the international perspective, and lay a solid foundation for your future career.</p>

### 参与科技交流活动

#### Participation in scientific and technological exchange activities

01 感知中国系列活动 "Experiencing China" Series Program	02 国际学术会议 International Academic Conferences	03 科技论坛与讲座 Science and Technology Forums and Lectures	04 文化交流活动 Cultural Exchange Activities
<p>参观高新技术企业与研究机构，深入了解中国科技前沿。</p> <p>Visit high-tech enterprises and research institutes to gain an in-depth understanding of China's scientific and technological frontiers.</p>	<p>发表论文，展示研究成果，拓展国际学术视野。</p> <p>Publish papers, present research results, and expand international academic horizons.</p>	<p>聆听行业领袖分享，参与热点议题讨论，激发创新灵感。</p> <p>Listen to industry leaders share their views, participate in hot topic discussions, and be inspired to innovate.</p>	<p>增进跨文化理解，构建国际友谊，促进多元思维碰撞。</p> <p>Enhance cross-cultural understanding, build international friendships, and promote the collision of diverse thinking.</p>

### 世界科技创新的发展趋势

#### The development trend of world scientific and technological innovation

- 1、科技创新成为世界规模的强大潮流  
*Scientific and technological innovation has become a powerful trend on the world scale*
- 2、从模仿向自主创新转变  
*Shift from imitation to independent innovation*
- 3、知识资源成为科技创新的第一要素  
*Knowledge resources become the first element of scientific and technological innovation*
- 4、科学、技术、生产的一体化  
*Integration of science, technology and production*
- 5、多学科会聚和多技术集成  
*Multi-disciplinary convergence and multi-technology integration*
- 6、前沿技术成为创新竞争的主要焦点  
*Cutting-edge technology has become the main focus of innovation competition*
- 7、可持续发展成为创新的基本使命  
*Sustainable development has become the basic mission of innovation*

## 国际合作的重要性 Importance of international cooperation

- 加速知识传播 Accelerating knowledge dissemination**

国际合作促进科技知识快速传播，缩短技术迭代周期，推动全球科技进步。  
International cooperation promotes the rapid dissemination of scientific and technological knowledge, shortens the technology iteration cycle and promotes global scientific and technological progress.
- 解决全球挑战 Solving global challenges**

面对气候变化、疾病防控等全球性问题，国际合作是寻找解决方案的关键途径。  
In the face of global problems such as climate change, disease prevention and control, international cooperation is a key way to find solutions.
- 促进和平与发展 Promotion of peace and development**

科研合作增进国家间理解与信任，为世界和平与可持续发展奠定坚实基础。  
Cooperation in scientific research enhances understanding and trust among countries and lays a solid foundation for world peace and sustainable development.

## 实际行动与成果 Practical actions and results

- 参与国际大科学计划 Participation in major international scientific programs**

中国深度参与国际热核聚变实验堆（ITER）等项目，推动全球科技前沿探索。  
China's deep participation in projects such as the International Thermonuclear Experimental Reactor (ITER) promotes global exploration of scientific and technological frontiers.

- 联合实验室与平台 Joint laboratories and platforms**

共建联合实验室和技术转移平台，促进跨国科研合作与技术成果转化。  
To build joint laboratories and technology transfer platforms to promote transnational scientific research cooperation and the transformation of technological achievements.

- '一带一路'科技创新  
'Belt and Road' Science, Technology and Innovation**

通过“一带一路”倡议，加强与沿线国家的科技交流与合作，共享科技发展红利。  
Through the 'Belt and Road' initiative, we will strengthen scientific and technological exchanges and cooperation with the countries along the route and share the dividends of scientific and technological development.

- 知识产权与国际组织 Intellectual property and international organizations**

完善知识产权保护体系，鼓励国际科技组织在中国设立机构，举办顶尖科学家论坛。  
It will improve the system of intellectual property protection, encourage international scientific and technological organizations to set up offices in China, and hold forums for top scientists.

我们要以全球视野谋划推动创新，要从百年变革的角度思考创新；

我们要为这个世界注入创新的基因，注入创新的DNA，我们才有未来。

We need to plan and promote innovation from a global perspective. We need to think about innovation from the perspective of a century of change.

We should inject the gene of innovation into the world, inject the DNA of innovation, and we will have a future.

- Topic: Please share with us your knowledge and understanding of 'manufacturing technology is in the stage from traditional technology to green, digital, intelligent and systematic technology era'?
- 对“制造技术处于从传统技术向绿色化、数字化、智能化和系统化技术时代迈进阶段”的认识和理解？
- Pdf of Doc format
- Student ID-Name
- [suli@buaa.edu.cn](mailto:suli@buaa.edu.cn)
- DDL: 23 Dec.

\*Please do not plagiarize, otherwise the assignment will be counted as 0 points



THANK YOU!

## 当代中国发展与社会实践

绿色生态文明建设



### 绿色生态文明建设

为什么建?

目标?

怎么建?

### 什么是绿色生态文明建设

生态文明建设是指在经济发展的同时，优化环境，保护生态，提升生态质量，实现经济、社会、环境协调发展的一种新型发展模式。

### 为什么建?

- 绿色生态环境是人类生存和发展的基础
- 是可持续发展的迫切需要 (绿色发展)
- 是中国人民追求美好生活的新需求

### 绿色生态文明建设的目标?

总体目标

2012 2017

美丽中国



### 绿色生态文明建设目标

1. 到2035年，中国节约资源和保护生态环境的空间格局、产业结构、生产方式和生活方式总体形成，环境明显改善，美丽中国基本实现。
2. 到2050年，生态文明全面提升，中国实现生态环境治理体系和治理能力现代化和美丽中国建设目标

## 怎么建？

顶层设计

立体实施

## 顶层设计

### 五位一体总体布局

经济建设 政治建设 文化建设 社会建设 生态文明建设

2012

协调

2015

创新

绿色

五大发展理念



## 顶层设计



2018年，“十九大”美丽中国，强国目标

六个工作原则



实施途径



目标实现

## 生态文明建设原则：六个坚持



- 坚持人与自然和谐共生
- 坚持绿水青山就是金山银山
- 坚持良好生态环境是最普惠的民生福祉
- 坚持山水林田湖草是生命共同体
- 坚持共谋全球生态文明建设
- 坚持用最严格制度最严密法治保护生态环境

## 人与自然和谐共生

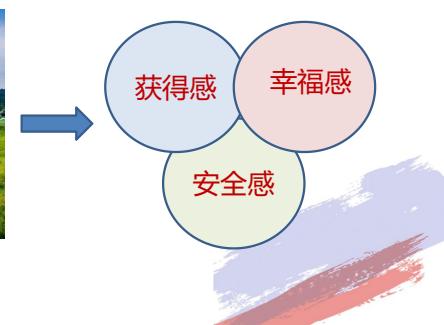
- 尊重自然
- 顺应自然
- 保护自然



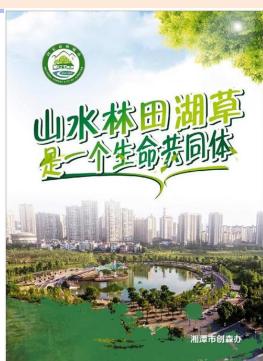
## 绿水青山就是金山银山



## 良好生态环境是最普惠的民生福祉



## 坚持山水林田湖草是生命共同体



## 坚持用最严格制度最严密法治保护生态环境

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## 共谋全球生态文明建设



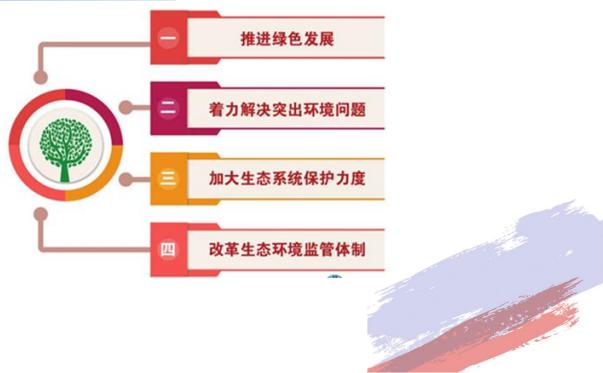
## 实施途径

### 途径方法



## 如何实施？

- [发展](#)
- [问题](#)
- [力度](#)
- [体制](#)



## 大力推进绿色发展



- [推进形成绿色空间格局](#)
- [推进产业结构绿色转型](#)
- [推进生产方式绿色转型](#)
- [加快形成绿色生活方式](#)

## 推进形成绿色空间格局-实例1



## 推进形成绿色空间格局-实例1



## 加快形成绿色生活方式-实例2

### • 大力推动绿色示范创建

（创建节约型机关、建设绿色学校、创建绿色社区、培育绿色家庭等）

### • 增加绿色产品和服务供给

（完善绿色产品推广、大力发展绿色物流）



## 着力解决突出环境问题

### 坚决打好污染防治攻坚战

- 打赢蓝天保卫战
- 打好碧水保卫战
- 扎实推进净土保卫战

# 首钢大搬迁？

首钢：中国最大的钢铁联合企业



冬奥：高质量服务保障冬奥赛事



文化：工业遗存再利用 打造工业旅游精品



生态：构建京西绿色生态新格局



国际：构筑国际化特色产业生态

## 加大生态保护与修复力度

- 统筹山水林田系统治理
- 构建国土生态安全格局
- 划定并严守生态保护红线（三条红线）
- 建立以国家公园为主体的自然保护地体系
- 保护生物多样性
- 修复生态退化地区

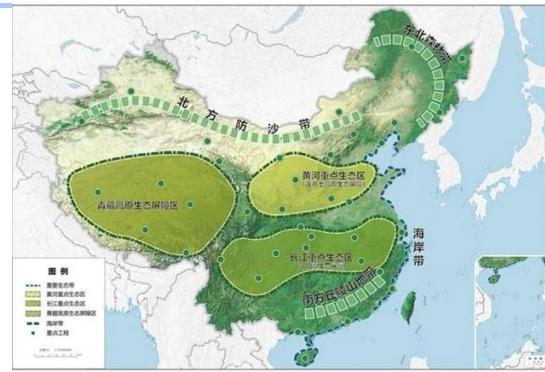


# 实例：构建国土生态安全格局

## 两屏三带、一区多点

- 两屏：青藏高原生态屏障、黄土高原-川滇生态屏障
- 三带：东北森林带、北方防沙带、南方丘陵山地带
- 一区多点：国家重点生态功能区、点状分布的国家禁止开发区

## 两屏



## 三区



注：引自国务院印发的《全国主体功能区规划》

## 国家公园

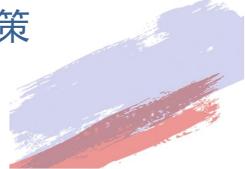




库布其沙漠：沙漠变绿洲的奇迹

## 改革生态环境监管体制

- 推进生态环境治理体系和治理能力现代化
- 落实政府管理责任
- 落实排污者生态环境责任
- 完善基于市场机制的生态环保政策
- 构建生态环境保护社会体系



## 取得的成就

- 生态保护的理念实现从跟随到引领的历史性飞跃
- 生态治理体系实现由粗放到严密的历史性转变
- 自然生态保护实现由弱到强的历史性跨越
- 生态状况实现由局部改善到总体改善的历史性转折



## 具体数据:更绿、更美

中国建立各类自然保护地11029处，总面积占陆域国土面积的18%，提前实现联合国《生物多样性公约》提出的“到2020年保护地面积达到17%”的目标；全国森林覆盖率由新中国成立之初的约8%提高到22.96%；近20年我国新增植被覆盖面积约占全球新增总量的25%，居全球首位。



## 具体数据:更绿、更美

### 自然保护区迅速增加

➤ 2017年，全国自然保护区达到2750个，比2000年增加了1523个

➤ 2017年，自然保护区面积达到14717公顷，比2000年增长了50%

## 具体数据：天更蓝

年份	城市环境空气质量达标城市数量	占比
2020年前11个月	337个地级及以上城市空气质量平均优良天数比例	87.9%
2019	157	46.9%
2018	121	35.8%
2017	99	29.3%
2016	84	24.9%
2015	73	21.6%

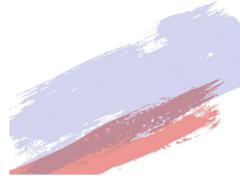




美丽地球，我们都是建设者

## 参考文献

1. 推进生态文明，建设美丽中国 人民出版社&党建读物出版社
2. 中国式现代化 第五章 人与自然和谐共生的现代化 东方出版社



## 思考题

1. 中国绿色生态文明建设的总体目标是什么？具体目标是什么？
2. 生态文明建设的重要意义是什么？
3. 简述绿色生态文明建设的原则是什么？
4. 人与自然和谐共生的内涵是什么？
5. 简要说明中国在生态文明建设中着重做了哪些工作？
6. 举例说明什么是绿色生活方式。





- 你为何选择留学中国呢？Why do you choose to study in China?
- 你对中国的高等教育有哪些了解？What do you know about higher education in China?
- 通过在中国大学的学习，你预期的收获是什么呢？What do you expect to gain from your study experience in China?

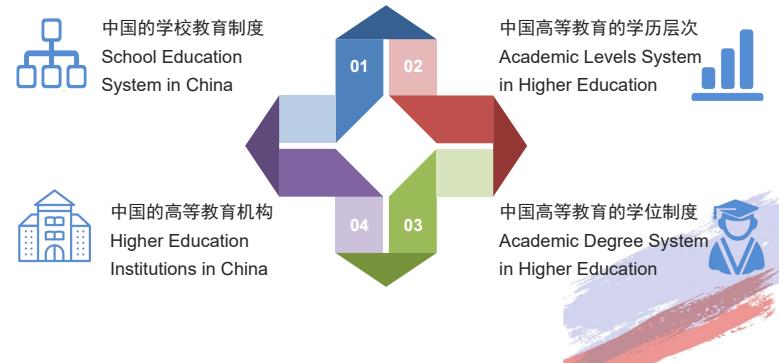


## 主要内容 Contents

- 1 中国高等教育体系简介  
Overview of China's higher education system
- 2 中国高等教育发展概况  
Overview of China's higher education development
- 3 中国高校“双一流”建设  
The construction of "Double First-Class" universities in China
- 4 中国高等教育的对外开放  
The opening up of Higher education in China



## 几个基本概念 Some Basic Concepts



## 中国的学校教育制度 School Education System in China



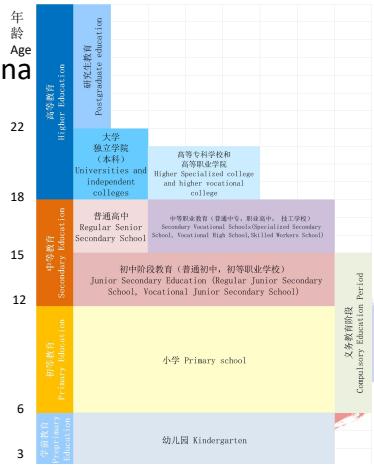
## 中国的学校教育制度

### School Education System in China

- | 学前教育 Primary Education
- | 初等教育 Primary Education
- | 中等教育 Secondary Education
- | 高等教育 Higher Education

高等教育，是指在完成高级中等教育基础上实施的教育

Higher education means education conducted on the basis of completion of Senior secondary education.



## 中国高等教育的学历层次与学位制度

### Academic Level and Degree System in Higher Education



## 中国高等教育的学历层次与学位制度

### Academic Level and Degree System in Higher Education



## 中国的高等教育机构

### Higher Education Institutions (HEI) in China



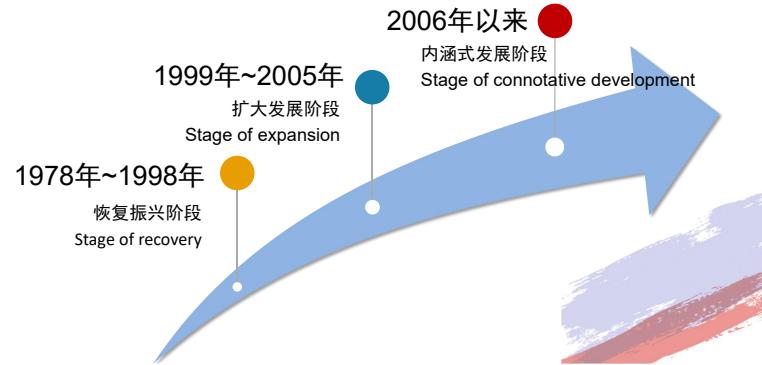
2

## 中国高等教育发展概况

Overview of China's higher education development

## 中国高等教育的发展历程

### The Development of Higher Education in China



## 恢复振兴阶段（1978-1998） Stage of recovery

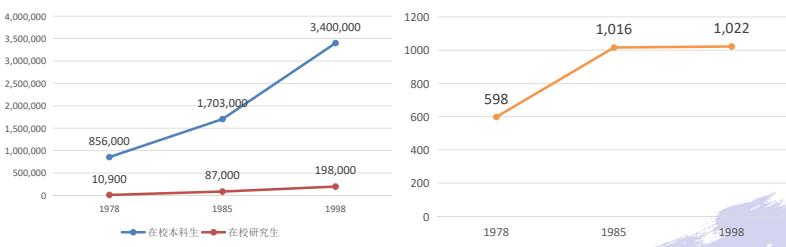


**1978年**  
**中国改革开放**  
China's reform and opening-up

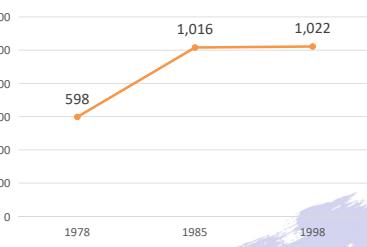
**1977年**  
**中国“高考”恢复**  
Resumption of National College Entrance Examination



## 恢复振兴阶段（1978-1998） Stage of recovery



1978年-1998年中国高校在校生人数增长趋势（单位：人）  
The increasing trend of the number of students in universities and colleges in China (1978~1998)



1978年-1998年中国高校数量增长趋势（单位：所）  
The increasing trend of the number of universities and colleges in China (1978~1998)

## 恢复振兴阶段（1978-1998） Stage of recovery

年份 Year	本专科在校生 Undergraduates in universities and colleges	研究生在校生 Postgraduates in universities and colleges	高校数量 Number of universities and colleges	高等教育毛入学率 Gross enrollment rate of higher education
1978	856,000	10,900	598	1.55%
1985	1,703,000	87,000	1,016	2.91%
1998	3,400,000	198,000	1,022	9.76%

**高等教育毛入学率**  
Higher education gross enrollment rate

### 高等教育毛入学率：

高等教育在学人数与适龄人口之比  
\*适龄人口是指在18岁-22岁这个年龄段的人口数

**Higher education gross enrollment rate:**  
The ratio of the number of students in higher education to the school-age population\*.

\*The school-age population is the number of people between the ages of 18 and 22

**高等教育毛入学率**反映一个国家高等教育相对规模和教育机会，是衡量教育发展水平的重要指标

**Higher education gross enrollment rate** reflects the relative scale and educational opportunities of a country's higher education and is an important indicator to measure the level of educational development in a country.

$$\text{Higher education gross enrollment rate} = \frac{\text{Number of students in higher education}}{\text{School-age population}} \times 100\%$$

- 高等教育的毛入学率低于15%的属精英教育阶段，毛入学率大于15%小于50%为大众化阶段，毛入学率大于50%的为普及化阶段。

——根据美国社会学家马丁·特罗的理论

- The gross enrollment rate of higher education is less than 15% in the elite education stage, the gross enrollment rate is greater than 15% and less than 50% in the mass stage, and the gross enrollment rate is greater than 50% in the universal stage.

——According to the theory of Martin Trow, American sociologist

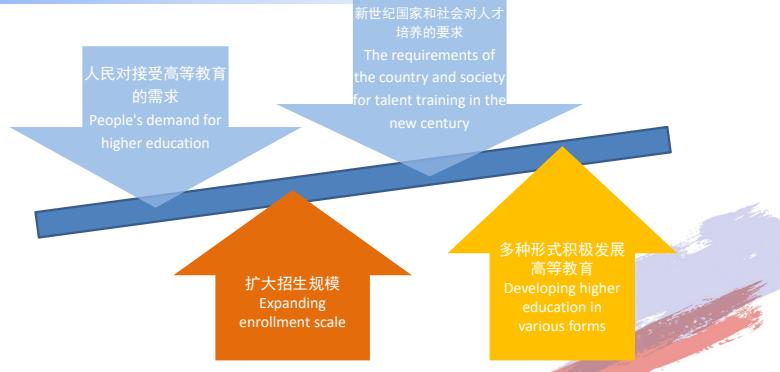
## 恢复振兴阶段（1978-1998） Stage of recovery



1978年-1998年中国高等教育毛入学率增长趋势  
The growth trend of higher education gross enrollment rate in China(1978~1998)

## 扩大发展阶段（1999-2005）

### Stage of expansion



## 扩大发展阶段（1999-2005）

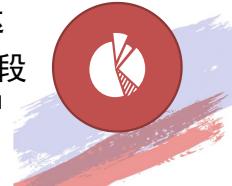
### Stage of expansion



**大扩招** A dramatic enrollment expansion of higher education  
到2005年：总规模：2300万人，居世界第一，**高等教育大国**  
By 2005, total size: 23 million people, ranking first in the world, becoming a major country of higher education

到**2002**年，中国高等教育毛入学率达  
到**15%**，中国进入**高等教育大众化阶段**

By 2002, China's higher education gross enrollment rate reached 15%, and China entered the **stage of Higher Education Massification(Popularization)**



## 扩大发展阶段（1999-2005）

### Stage of expansion

2005年  
➤  
1998年

		增长率 Rate of increase
本专科招生数增长	396.1万人 Undergraduate enrollment increase	365%
本专科在校生数增长	1221万人 Number of undergraduate students in universities and colleges increase	358%
毛入学率增长	11.24% The gross enrollment rate increase	115%
高校数量增加	770所 Number of universities and colleges increase	75%

## 扩大发展阶段（1999-2005）

### Stage of expansion

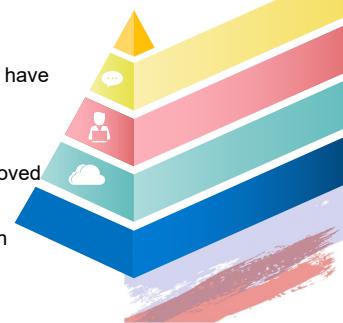
人才培养和储备  
Talent cultivation and reserve

高等教育机会大幅增加  
Opportunities for higher education have increased dramatically

高等教育办学条件改善  
Conditions for running higher education improved

高等教育思想转变  
A shift in thinking in higher education  
Plan-oriented → Demand-oriented

**主要成效**  
**Main Achievements**



## 内涵式发展阶段（2006年以来）

### Stage of connotative development

#### • 高等教育“大众化”进程中的问题

Common problems in the process of Higher Education Massification

- ? 学校教育观念和管理制度 Education concept and management system
- ? 人才培养模式 Talent training mode

**人才培养质量 Quality of talent cultivation?**  
**从大到强 From big to strong?**

- ? 毕业生的社会认可与就业压力 Social recognition and employment pressure of graduates

## 内涵式发展阶段（2006年以来）

### Stage of connotative development

稳定招生规模  
Stabilize enrollment scale

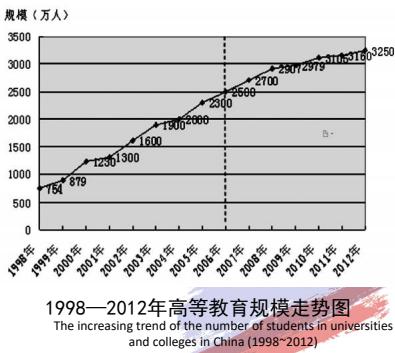
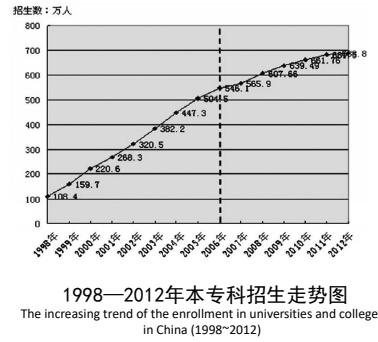
**提升创新能力**  
Enhance innovation capacity

提高人才培养质量  
Improve the quality of education

**深化体制改革**  
Deepen institutional reform



## 内涵式发展阶段（2006年以来） Stage of connotative development



## 2023年全国高等教育发展情况 Overview of China's higher education development in 2023

普通高等学校共 **3,074** 所  
Number of general institutes of higher education



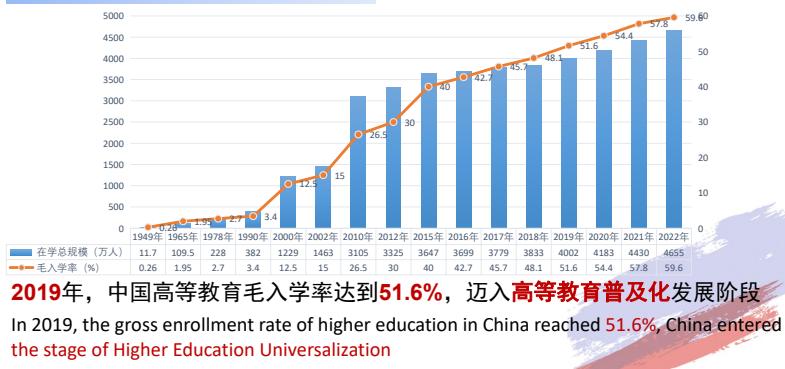
全国各类高等教育在学总规模 **47,631,900** 人  
Total student scale of higher education

全国高等教育专任教师为 **2,074,900** 人  
Total faculty number in higher education  
普通本科学校师生比 **17.51:1**  
Student-teacher ratio



2023年，中国高等教育毛入学率 **60.2%**  
In 2023, the gross enrollment rate of higher education in China is **60.2%**

## 中国高等教育迈入普及化阶段 China entered the stage of Higher Education Universalization



## 中国高等教育办学规模的发展 Development of the scale of higher education



## 中国高校师资队伍的发展 Development of faculty in universities

- 专任教师数量增长 The number of full-time teachers has increased **20.63万人** (1978) → **160.20万人** (2016)
- 生师比 student-teacher ratio **4.21:1** (1978) → **17.07:1** (2016)
- 专任教师学历学位层次提高：博士学位专任教师比例 The degree level of full-time teachers is improved: the proportion of full-time teachers with doctoral degrees **0.38%** (1984) → **22.86%** (2016)



中国改革开放40年 (1978~2016) In the past 40 years since China's reform and opening-up (1978~2016)

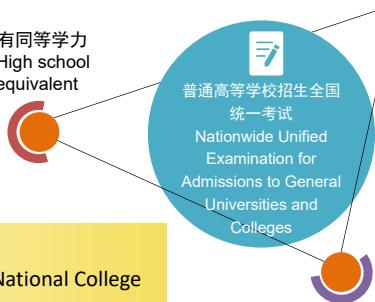
## 中国高等教育办学体制的改革与发展 Reform and Development of higher education school-running system in China



## 中国高等学校招生制度的改革与发展

Reform and development of college enrollment system in China

高中毕业或具有同等学力  
Qualification: High school graduate or equivalent



教育部统一调度  
Unified dispatch by the Ministry of Education

选拔性考试  
Selective examination

中国“高考”  
“GaoKao” - National College Entrance Examination

## 高考的历史脉络 Development of GaoKao

恢复“高考”  
GaoKao Resumption

1977年



全国统一普通高等学校招生制度建立  
Unified admission system set up

1952年



发展至今  
40余年



不断发展和改革，是中国乃至全世界最大规模的考试  
Continuous development and reform, GaoKao is the largest test system in China and even in the world

## 高考制度改革 GaoKao System Reform

- 分类考试 Classified Examination
- 综合评价 Comprehensive Evaluation
- 多元录取 Diverse Admission Approach
- 促进公平、科学选才、监督有力 Fair and scientific talent selection and effective supervision
- 从“独木桥”到“立交桥” from “log bridge” to “flyover”

## 小结 Summary

- 中国高等教育发展40年 Over the past 40 years of development of China's higher education
  - 从外延发展到内涵发展  
From denotative development to connotative development
  - 从精英教育到普及教育  
From elite education to universal education
  - 从高等教育穷国到高等教育大国，现在正在向高等教育强国的目标努力  
Transforming from a poor country in higher education to a big country in higher education, and now striving to become a powerful country in higher education

## 中国高校“双一流”建设

The construction of "Double First-Class" universities in China

3

“双一流”  
建设

Double  
First-class  
Initiative

2015 (implemented in 2017, be ongoing)

985工程

985 Project

211工程

211 Project

1993 (implemented in 1995)

National strategies in higher education

## “211”工程 211 Project

- 面向**21**世纪、重点建设**100所**左右的高等学校和一批重点学科的建设工程
- Facing the **21st** century, around **100** key universities and a batch of key disciplines construction
- 1995年开始实施, **112所**高校
- Implemented in 1995, 112 universities in total

## “985”工程 985 Project

- 1998年5月**, “为了实现现代化, 我国要有若干所具有世界先进水平的一流大学”
- Proposed in May 1998, "In order to realize modernization, China must have several world-leading first-class universities."
- 分为二期建设, 共**39所**学校
- Two phases of construction, a total of 39 universities

## “双一流”建设 "Double First-Class" initiative

### 建设世界一流大学和一流学科

### "Double First-Class" initiative

-First-class universities and first-class disciplines in the world

- 2015年提出, 2017年开始实施  
Proposed in 2015, implemented in 2017
- “211”工程和“985”工程由“双一流”建设所统筹和整合  
211 Project and 985 Project are **integrated** into Double First-Class initiative

## “双一流”建设 "Double First-Class" initiative

**42所**  
世界一流大学  
建设高校  
First-class universities  
with First-class  
disciplines  
(A类36所, 318个学  
科; B类6所, 12个学  
科)

**95所**  
世界一流学科  
建设高校  
First-class disciplines  
construction  
universities (135个  
学科)

“双一流”建设高  
校共计**137**所  
“双一流”建设学  
科共计**465**个

## 世界一流大学建设高校

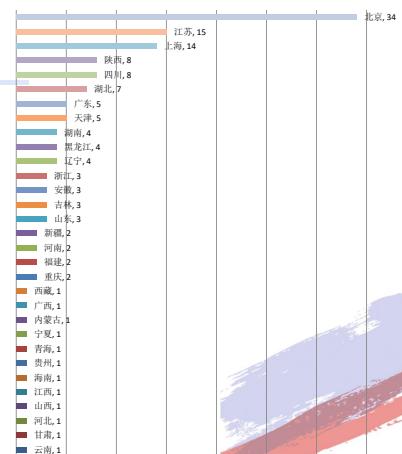
First-class Universities Construction Name List (Class A, 36 in total)

### 世界一流大学建设高校 (A类) 36所

北京大学	中国人民大学	清华大学	北京航空航天大学	北京理工大学
中国农业大学	北京师范大学	中央民族大学	南开大学	天津大学
大连理工大学	吉林大学	哈尔滨工业大学	复旦大学	同济大学
上海交通大学	华东师范大学	南京大学	东南大学	浙江大学
中国科学技术大学	厦门大学	山东大学	中国海洋大学	武汉大学
华中科技大学	中南大学	中山大学	华南理工大学	四川大学
重庆大学	电子科技大学	西安交通大学	西北工业大学	兰州大学
国防科技大学				

### “双一流”建设高校地 区分布

### Distribution of “Double first-class” construction



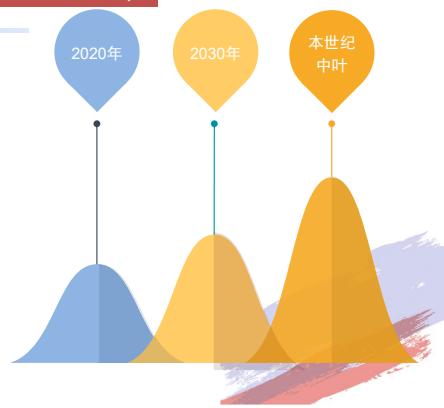
## 建设任务 Mission



## 总体目标 Goals

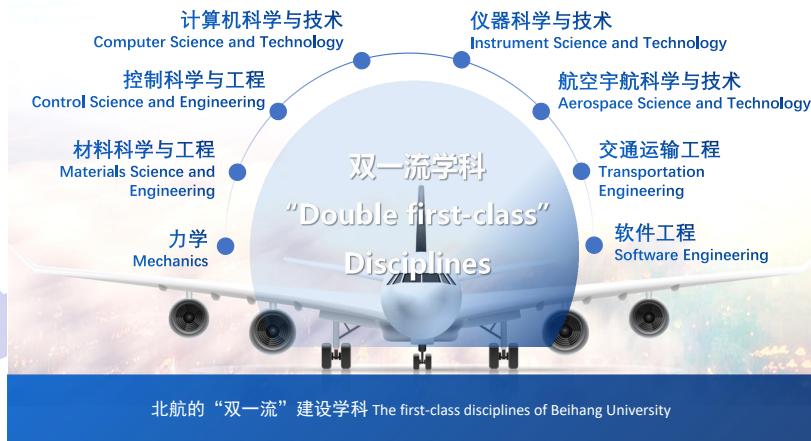
- 到2020年,若干所大学和一批学科进入世界一流行列,若干学科进入世界一流学科前列。
- 到2030年,更多的大学和学科进入世界一流行列,若干所大学进入世界一流大学前列,一批学科进入世界一流学科前列,高等教育整体实力显著提升。
- 到本世纪中叶,一流大学和一流学科的数量和实力进入世界前列,基本建成高等教育强国。

三步走 Three steps



## 总体目标 Goals

- By 2020, several universities and a number of disciplines will rank among the **first-class** in the world, and several disciplines will rank among the **top** in the world.
- By 2030, more universities and disciplines will rank among the **first-class** in the world, several universities and a number of disciplines will rank among the **top** in the world, and the overall strength of higher education will be significantly improved.
- By the middle of this century, the number and strength of first-class universities and disciplines will rank among the **top** in the world, and China will basically **become a strong country in higher education**.



北航的“双一流”建设学科 The first-class disciplines of Beihang University

## 中国高水平大学建设的主要成效

Main achievements of high-level universities construction in China



## 2023年世界大学排名 World University Rank

The tables list the top universities in China based on their global ranking:

Rank	University	Overall Rank
12	Peking University	91.3
14	Tsinghua University	90.1
=34	Fudan University	81.5
=42	Zhejiang University	79.3
46	Shanghai Jiao Tong University	77.4
94	University of Science and Technology of China	60.7
=95	Nanjing University	

Other tables include:

- THE WORLD UNIVERSITY RANKINGS**: Shows Tsinghua University at rank 16, Peking University at rank 17, and Fudan University at rank 51.
- QS WORLD UNIVERSITY RANKINGS**: Shows Tsinghua University at rank 16, Peking University at rank 17, and Fudan University at rank 51.
- SHANGHAI RANKING**: Shows Tsinghua University at rank 1, Peking University at rank 2, and Fudan University at rank 6.

## 中国高等教育的对外开放 The Opening up of Higher Education in China

4

### 中国高等教育的对外开放 The Opening up of Higher Education in China

引进来  
BRING IN

走出去  
GO GLOBAL

### 中国高等教育的对外开放 The Opening up of Higher Education in China

全方位、多层次、宽领域的对外开放格局  
All-round, Multi-level, Wide field Pattern

- 出国留学与来华留学 Study abroad and study in China
- 中外合作办学 Chinese-foreign cooperative education
- 学历学位互认 Mutual recognition of higher education degrees
- 科研合作 Scientific research cooperation
- 积极参与全球教育治理 Globaleducation governance
- .....

### 中国高等教育的对外开放 The opening up of Higher education in China

#### 出国留学 Study abroad

总规模: 70.35万人 (2019年)  
Total scale: 703,500 (2019)

1978至2019年, 各类出国留学人员累计达656万人  
From 1978 to 2019, a total of 6.56 million Chinese people studied abroad

世界最大留学生输出国  
The largest source country of international students in the world

#### 来华留学 Study in China

总规模: 49万人 (2018年)  
Total scale: 490,000 (2018)

亚洲最大的留学目的国  
The largest destination of international students in Asia

世界第三大留学生目的国  
The third largest destination of international students in the world

### 来华留学高等教育概览 Overview of International Students studying in China

2018年共有来自**196**个国家和地区的**492,185**名各类外国留学人员在**31**

个省、自治区、直辖市的**1004**所高等学校学习。

比2017年增加了3,013人, 增长比例为0.62% (以上数据均不含港、澳、台地区)。

• In 2018, a total of 492,185 international students from 196 countries and regions studied in 1,004 institutions of higher education in 31 provinces, autonomous regions and municipalities.

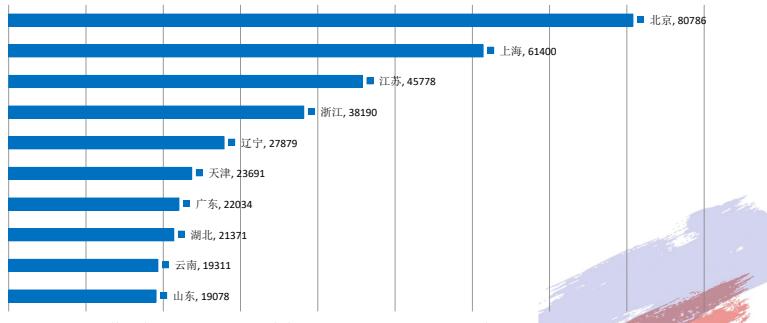
• This number 3,013 more than in 2017, an increase of 0.62% (excluding Hong Kong, Macao and Taiwan regions).

### 来华留学人数统计 Statistics on the number of international students studying in China

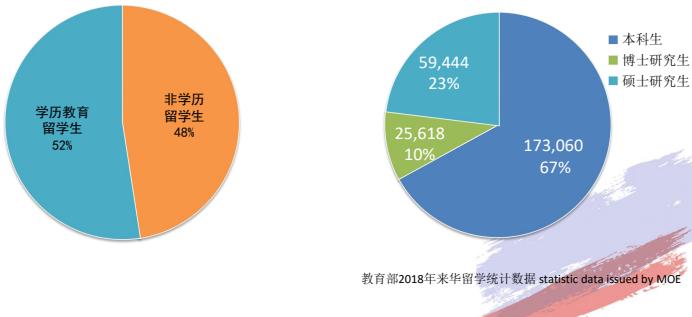
洲别	总人数 Total number	占总数百分比 Percentage of total
亚洲 Asia	95,043	59.95%
非洲 Africa	81,562	16.57%
欧洲 Europe	73,618	14.96%
美洲 America	35,733	7.26%
大洋洲 Oceania	6,229	1.27%

教育部2018年来华留学统计数据 statistic data issued by MOE

## 来华留学地区分布 Regional Distribution

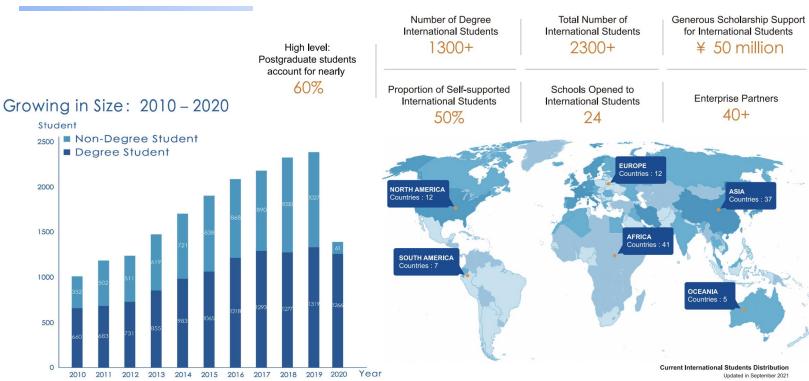


## 来华留学生的层次与类别 Level & Category



## 北航国际学生概况

### Overview of international Students in Beihang University



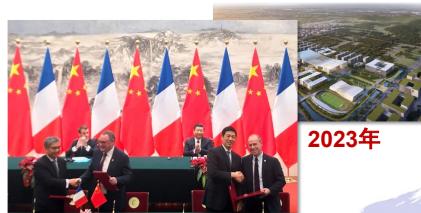
## 中外合作办学 Chinese-Foreign Cooperative Education

- 现有中外合作办学机构和项目2332个，其中本科以上1230个。目前，国内本科以上中外合作办学在读学生已超过30万人，中国成为世界一流大学的重要合作方（截至2020年底）

There were **2,332** Chinese-foreign cooperative schools and programs, of which 1,230 were undergraduate or above. At present, there are more than **300,000** current students at undergraduate level or above in Chinese-foreign cooperative education, and China has become an important partner of world-class universities (By the end of 2020)

## 北航的中外合作办学机构

### Chinese-Foreign Cooperative Education @ Beihang



北航中法工程师学院成立  
北航与法国中央理工大学集团合作创建  
The Sino-French Engineer School was established in cooperation between Beihang and Groupe des Ecoles Centrales de France

北航中法航空学院正式获批  
北航与法国国立民航大学（ENAC）合作创建  
The Sino-French Aviation Institute was established in collaboration with the École Nationale de l'Aviation Civil (ENAC)

## 高等教育学历、学位互认

### Mutual recognition of higher education degrees

- 中国已与188个国家和地区、46个重要国际组织建立了教育合作与交流关系，与54个国家签署了高等教育学历学位互认协议（截至2020年）

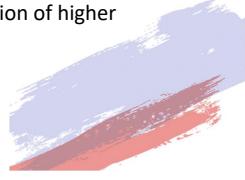
China has established educational cooperation and exchange with **188**

countries and regions and **46** international organizations, has forged

agreements with **54** countries on mutual recognition of qualifications and academic degrees in higher education (By 2020)

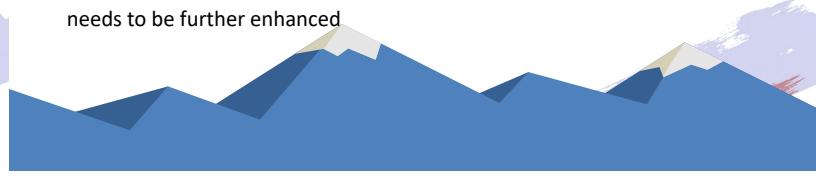
## 总结 Summary

- 高等教育**规模**不断扩大 The scale of higher education continues to expand
- 高等教育**质量**显著提高 The quality of higher education has improved markedly
- 高等教育**体制改革**卓有成效 Significant progress was made in the reform of the higher education system
- 高等教育**国际化水平**进一步提升 The internationalization of higher education has been further enhanced



## 挑战 Challenges

- 教育**质量**进一步提高 The quality of higher education needs to be further improved
- 教育**资源公平**问题 The issue of equity in educational resources needs to be further resolved
- 国际**影响力**进一步提升 The international influence of higher education needs to be further enhanced



## 思考题 Questions

- 比较你的国家与中国在教育制度和高等教育体系方面的异同
- Compare the education systems in China with ones in your home country



## 课后复习 Review

- 中国改革开放以来，高等教育发展大致经历了哪几个阶段？What stages have higher education development gone through since China's reform and opening up?
- 中国分别在哪一年实现了高等教育大众化和高等教育普及化？In which year did China achieve higher education massification (or popularization) and higher education universalization respectively?
- 中国高校“双一流”建设的全称和目标分别是什么？What are the full name and goals of the “Double First-class” construction in Chinese universities?



# 当代中国发展与社会实践

Contemporary China's Development and Social Practice

## 北京城市发展与规划

Beijing Urban Development and Planning



• 你对北京（或中国其他一些大城市）有哪些了解？What do you know about Beijing (or some other big cities in China)?

• 你为何选择北京作为你留学中国的目的地？Why do you choose Beijing as your destination for study?

• 你对北京未来的城市发展有哪些期待？What are your expectations for Beijing's future urban development?



## 主要内容 Content

1

### 当代中国城市发展概况

Overview of Urban Development in Contemporary China

2

### 北京城市发展历史

The History of Beijing's Urban Development

3

### 当代北京城市发展概况

Overview of Contemporary Beijing's Urban Development

4

### 北京城市发展总体规划

Beijing Urban Development Master Plan

5

### 京津冀协同发展

Coordinated Development of Beijing-Tianjin-Hebei Region

1

## 当代中国城市发展概况

Overview of Urban Development in Contemporary China



## 当代中国城市发展概况

Overview of Urban Development in Contemporary China

### 当代中国的城市化（城镇化）进程

Urbanization in Contemporary China

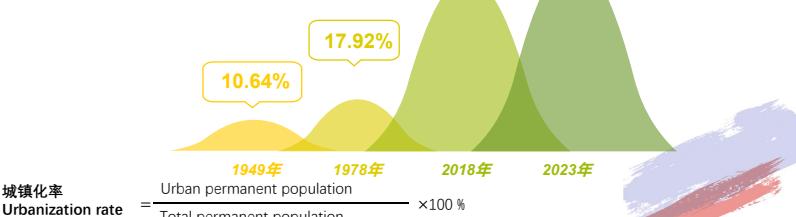
中国常住人口城镇化率发展

The growth trend of permanent population urbanization rate in China

59.58%

66.16%

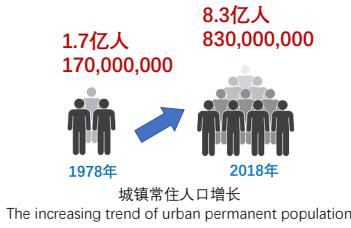
$$\text{城镇化率} = \frac{\text{Urban permanent population}}{\text{Total permanent population}} \times 100\%$$



## 当代中国城市发展概况 Overview of Urban Development in Contemporary China

中国改革开放40年来的城市发展（1978~2018）

Urban development in 40 years of reform and opening up in China (1978~2018)



## 当代中国城市发展概况 Overview of Urban Development in Contemporary China

Urban development in 40 years of reform and opening up in China (1978~2018)



## 当代中国城市发展概况 Overview of Urban Development in Contemporary China

Alpha级别（世界一线城市），中国有6座城市

6 Chinese cities are listed in Alpha Class (first-tier cities in the world) of World City Ranking 2020:

香港（3）、上海（5）、北京（6）、广州（34）、台北（36）、深圳（46）  
Hong Kong (3), Shanghai (5), Beijing (6), Guangzhou (34), Taipei (36), Shenzhen (46)

中国现有超大城市7座

Megacities with a permanent urban population of more than 10 million

上海、北京、深圳、重庆、  
广州、成都、天津

中国特大城市 14座

Megacities with a permanent urban population of more than 5 million and less than 10 million

武汉、东莞、西安、杭州、佛山、南京、沈阳、  
青岛、济南、长沙、哈尔滨、郑州、昆明、大连

数据来源 Data source: 1.全球化与世界城市研究网络 (Globalization and World Cities Study Group and Network, 简称GaWC)

2.第七次全国人口普查数据, 截至2020年11月 Seven<sup>th</sup> National Census data, updated in November 2020

## 当代中国城市发展概况-城市群建设

Overview of Urban Development in Contemporary China-City Clusters Construction

### ① 京津冀 城市群

Beijing-Tianjin-Hebei Region City Cluster

### ② 长三角 城市群

Yangtze River Delta City Cluster

### ③ 珠三角 城市群

Pearl River Delta City Cluster

在特定范围内

1个以上 特大城市 为核

3个以上 大城市 为构成单元

依托发达的交通通信等 基础设施网络 所形成

空间组织紧凑、经济联系紧密、并最终实现高度同城化和高度一体化的 城市群体。

-Relying on developed infrastructure networks such as transportation and communication

-An urban group with compact spatial organization, close economic ties, and high degree of urban integration ultimately

-Core: 1 or more megacities

-Component units: 3 or more large cities



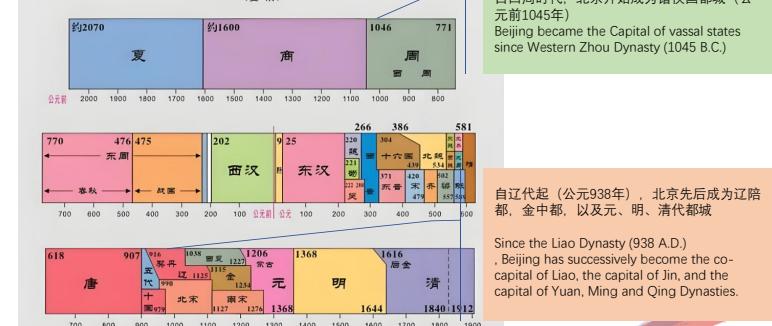
## 北京城市发展历史 The History of Beijing's Urban Development

## 北京城市发展历史 The History of Beijing's Urban Development

Chronology of Ancient Chinese History

中国历史纪年表

(夏~清)



## 北京城市发展历史

### The History of Beijing's Urban Development

西周

Western Zhou Dynasty

辽

Liao

金

Jin

元

Yuan

明

Ming

清

Qing

中华人民共和国

People's Republic of China

诸侯国都城  
Capital of vassal states

陪都  
Co-capital

中都  
Capital

大都  
Capital

都城  
Capital

首都  
Capital

公元前1045年 B.C.

公元938年 A.D.

1151年

1260年

1406年

1644年

1949年

时间轴

Time Line

3000多年建城史，800多年建都史

A city history of more than 3000 years, a capital history of more than 800 years

北京城区，肇始斯地，其时惟周，其名曰蓟。

位于北京的蓟城纪念柱

Ji city's column in Beijing



## 北京在历史上的别称 Another name for Beijing in history

yōu zhōu

幽州

jì chéng

蓟城

yān dū

燕都

dà dū

大都

Běi píng

北平



## 北京城市历史发展中的文化交融

### Cultural integration in the history of Beijing's Urban Development



## 当代北京城市发展概况

### Overview of Contemporary Beijing's Urban Development



## 当代北京城市发展概况

### Overview of contemporary Beijing's urban development

总面积 **1.6410万** 平方千米

The total area is 16,410 square kilometers

**16个行政区** Districts

2022年末，常住人口2184.3万人，其中，城镇人口1912.8万人，城镇化率**87.6%**

By the end of 2022, Beijing had 21.84 million permanent residents, among them, 19.13 million are urban residents, with the urbanization rate of 87.6%



1 Dongcheng District

2 Xicheng District

4 Haidian District

5 Fengtai District

3 Chaoyang District

6 Shijingshan District

## 当代北京城市发展概况-总体经济

Overview of contemporary Beijing's urban development-Overall Economy

GDP 4,161 billion Yuan  
Per Capita GDP 190 thousand Yuan

**41610.9**

地区生产总值(亿元)  
Gross Domestic Product(100 million yuan)



**190313**

人均地区生产总值(元)  
Per Capita Gross Domestic Product(yuan)

Add Value of Tertiary Industry as % of GDP 83.9%



**83.9**

第三产业增加值占地区生产总值比重(%)  
Added Value of Tertiary Industry as % of GDP(%)

## 当代北京城市发展概况-交通基础设施

Overview of contemporary Beijing's urban development-Traffic Infrastructure

Length of Operating Urban Rail Transit Lines: 797 kilometres (km.)

**797**

城市轨道交通运营线路长度(公里)  
Length of Operating Urban Rail Transit Lines(km.)

**30174**

公共汽电车运营线路长度(公里)  
Length of Operating Buses and Trolley Buses Lines(km.)

Length of Operating Buses Lines: 30,174 kilometres (km.)

**22363**

公路里程(公里)  
Highway Mileage(km.)

**712.8**

机动车保有量(万辆)

Possession of Motor Vehicles: 7,128 million

数据来源: 北京统计局 (2022年统计数据)  
Data source: Beijing Statistical Yearbook 2022, Beijing Municipal Bureau of Statistics

数据来源: 北京统计局 (2022年统计数据)  
Data source: Beijing Statistical Yearbook 2022, Beijing Municipal Bureau of Statistics

## 北京的交通基础设施 Traffic Infrastructure in Beijing



## 大型机场 Airports in Beijing

- 北京首都国际机场
- Beijing-Capital International Airport
- 北京大兴国际机场
- Beijing Daxing International Airport



## 北京首都国际机场 Beijing-Capital International Airport



全球规模最大的机场之一 One of the largest airports in the world  
2019年, 旅客吞吐量超过1亿人次, 位居亚洲第一, 全球第二  
The passenger throughput exceeded 100 million, ranking first in Asia and second in the world in 2019

## 北京大兴国际机场 Beijing Daxing International Airport



2014年12月26日, 开工建设 Construction started on December 26, 2014  
2019年9月25日, 正式通航 Officially launched on September 25, 2019

## 火车站 Railway Stations in Beijing

2017年6月25日，中国标准动车组被正式命名为“复兴号”，于26日在京沪高铁正式双向首发，时速350公里。“复兴号”是中国自主研发、具有完全知识产权的新一代高速列车。

On June 25, 2017, Chinese standard EMU, officially named "Fuxing", made its two-way debut on the Beijing-Shanghai high-speed railway on June 26 with a speed of 350 kilometers per hour.

"Fuxing" is a new generation of standard high-speed trains independently developed by China with complete intellectual property rights.



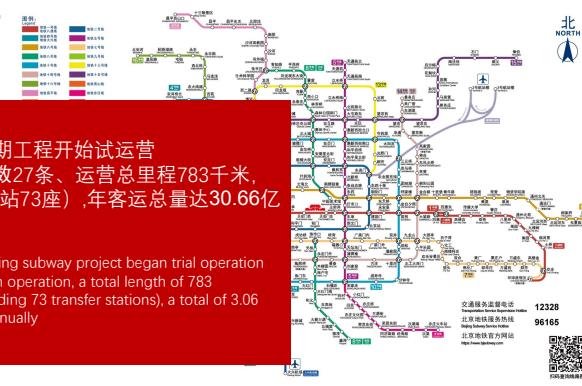
### 北京的主要火车站 Main Railway Stations in Beijing

- 北京站 Beijing Railway Station
- 北京西站 Beijingshi Railway Station
- 北京南站 Beijingsinan Railway Station
- 北京北站 Beijingbei Railway Station
- 北京东站 Beijingdong Railway Station

## 城市轨道交通 Urban Rail Transit in Beijing



### 北京城市轨道交通线网图 Beijing Rail Transit Lines



1971年，北京地铁一期工程开始试运营

2021年，运营线路总数27条、运营总里程783千米，车站463座（其中换乘站73座），年客运总量达30.66亿人次

In 1971, the first phase of Beijing subway project began trial operation  
In 2021, Beijing had 27 lines in operation, a total length of 783 kilometers, 463 stations (including 73 transfer stations), a total of 3.06 billion passenger transport annually

## 当代北京城市发展概况 教育

### Overview of contemporary Beijing's urban development- Education

数据来源：北京统计局（2022年统计数据）  
Data source: Beijing Statistical Yearbook  
2022, Beijing Municipal Bureau of Statistics



## 当代北京城市发展概况-博物馆

### Overview of contemporary Beijing's urban development- Museums



后母戊鼎，又称司母戊鼎，是商后期（约前16世纪至前11世纪）铸造的。是已知中国古代最重的青铜器，代表了高度发达的商代青铜文化，现珍藏于中国国家博物馆。

The Hou Mu Wu Ding, also known as Si Mu Wu Ding, was made in the late Shang Dynasty (about -11th century BC) and is the heaviest known bronze ware in ancient China. It represents highly developed bronze culture of Shang Dynasty, now is in the National Museum of China.

### 中国国家图书馆 National Library of China

中国国家博物馆  
National Museum of China



甲骨文，是刻或写在龟甲和兽骨上的文字，是迄今为止中国发现的年代最早、体系较为完整的文字，是汉字的源头（殷商时期）。中国国家图书馆是甲骨收藏量最多的机构。  
Oracle bone scripts engraved or written on tortoise shell and animal bones, is the earliest mature writing system found in China so far, are the source of Chinese characters (SHANG Dynasties). The National Library of China has the largest collection of oracle bones.

## 北京城市布局特点 Characteristics of Beijing Urban Layout





## 中轴线 The Central Axis of Beijing



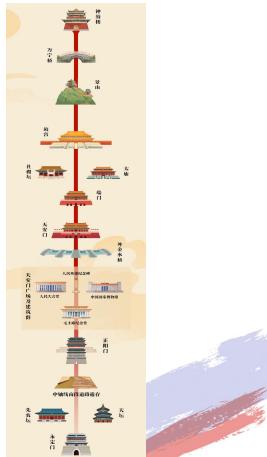
始建于13世纪，形成于16世纪，距今已有700多年历史

北京城市东西对称布局建筑物的对称轴，直线距离长约7.8公里，世界上现存最长的城市中轴线  
It was founded in the 13th century and formed in the 16th century, with a history of more than 700 years  
It's the north-south central axis of symmetry for the east-west layout of the building in Beijing, with a linear distance of about 7.8 kilometers, and is the longest existing urban axis in the world

## 北京中轴线 Central axis of Beijing

2024年7月27日，“北京中轴线”列入《世界遗产名录》  
On July 27, 2024, "the Central axis of Beijing" is listed the World Heritage List

北京中轴线一共15个遗产构成要素，采用自南向北延伸方向，  
重点地标建筑  
The central axis of Beijing has a total of 15 heritage components, with key landmark buildings extending from south to north



## 长安街 Chang An Avenue



横贯北京城区的东西中轴线路，以天安门城楼为中点，全长约55千米

国家行政、军事管理、文化、国际交往的主要体现

It is the east-west central axis across the downtown area of Beijing, with The Tian'anmen Rostrum as the midpoint, with a total length of about 55 kilometers.

It is the main embodiment of state administration, military management, culture and international exchanges

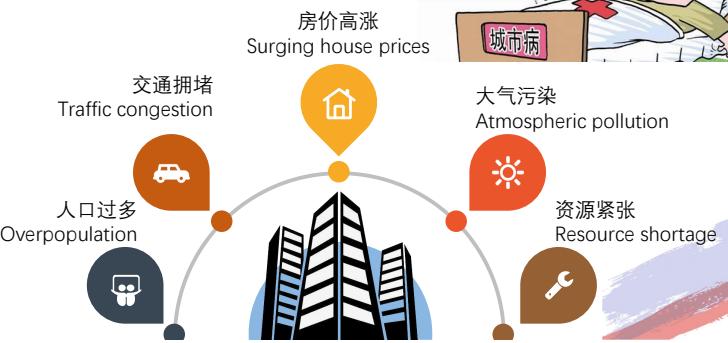


北京城市发展规划  
Beijing Urban Development Master Plan

## 北京城市总体规划 Beijing Urban Master Planning

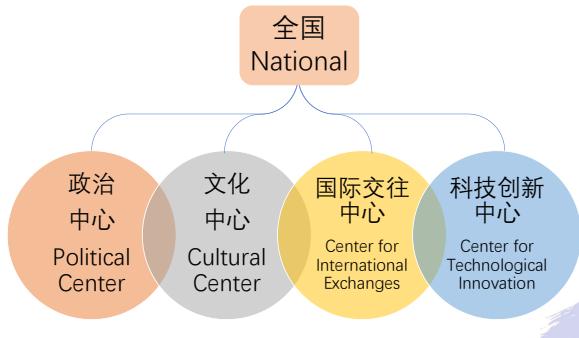
- 1953年, 第一版《北京城市总体规划》 First Edition
- 1958年, 第二版《北京城市总体规划》 Second Edition
- 1973年, 第三版《北京城市总体规划》 Third Edition
- 1982年, 第四版《北京城市总体规划》 Fourth Edition
- 1992年, 第五版《北京城市总体规划》 Fifth Edition
- 2005年, 第六版《北京城市总体规划》 Sixth Edition
- 2017年, 第七版《北京城市总体规划》 (2016~2035年) Seventh Edition

## “大城市病” Urban Diseases



## 北京城市功能定位 Beijing's Strategic Position

- 城市规划在城市发展起着重要引领作用
- Urban planning plays an important leading role in urban development.
- 思考“建设一个什么样的首都, 怎样建设首都”这个问题
- Thinking about the question "What kind of capital should we build and how to build?"



## 全国政治中心 National Political Center

- 为中央党政军领导机关提供优质服务, 以更大范围的空间布局支撑国家政务活动, 保证国家政务活动安全、高效、有序运行
- Providing quality services to the central Party, government and military leading organs
- Supporting national government activities with a wider range of spatial layout
- Ensuring the safe, efficient and orderly operation of national government activities



政治中心  
Political Center

## 全国文化中心 National Cultural Center

### 建设彰显文化自信与多元包容魅力的世界文化名城

To build a world cultural city that highlights its cultural confidence and charm of diversity and inclusiveness

- 历史文化名城保护体系
- 汇聚文化和教育资源
- 公共文化服务体系
- 文化创意产业体系

Historical and cultural city protection system  
Cultural and educational resources  
public service system of culture  
Cultural and creative industry system

文化中心  
Cultural Center



## 国际交往中心 National Center for International Exchanges

- 服务国家开放大局，建设国际交往活跃、国际化服务完善、国际影响力凸显的重大国际活动聚集之都
- To serve the overall situation of national opening up and build a major international event gathering city with active international exchanges, quality international services and prominent international influence

重大外交外事活动区、国际会议会展区、国际体育文化交流区、国际交通枢纽、外国驻华使馆区、国际商务金融功能区、国际科技文化交流区、国际旅游区、国际组织集聚区等9类国际交往功能空间布局

The functional space layout of international exchanges includes nine categories: major diplomatic and foreign activities area, international conference and exhibition area, international sports and cultural exchange area, international transportation hub, foreign diplomatic embassy area, international business and financial function area, international science and technology and cultural exchange area, international tourism area, and international organization gathering area



## 科技创新中心 National Center for Technological Innovation

- 发挥丰富的科技资源优势，不断提高自主创新能力，加快建设具有全球影响力的全国科技创新中心，努力打造世界高端企业总部聚集之都、世界高端人才聚集之都。
- Giving full play to the advantages in scientific and technological resources and constantly improving the capacity for independent innovation, accelerating the development of a national science and technology innovation center with global influence, and strive to build the world capital of high-end corporate headquarters and talent.

“三城一区”——中关村科学城、怀柔科学城、未来科学城和北京经济技术开发区

Zhongguancun Science City, Huairou Science City, Future Science City and Beijing Economic and Technological Development Zone



## 北京城市发展目标 Beijing Urban Development Goals



## 北京城市发展方式转变 Transformation of Beijing's Urban Development Mode



## 疏解首都人口 Reducing the population scale



## 城乡建设用地持续减量 Urban and rural construction land scale continued to decrease

从2018年至2020年，北京城乡建设用地减量约110平方公里  
From 2018 to 2020, Beijing's urban and rural construction land has been reduced by about 110 square kilometers

到2035年北京城乡建设用地将减至2760平方公里左右  
By 2035, Beijing's urban and rural construction land will be reduced to about 2,760 square kilometers



## 当代北京城市发展-产业发展结构 Industry Structure in Beijing's urban development

三次产业增加值结构 (%)  
Structure of Added Value of Three Industries (%)



数据来源：北京统计局（2022年统计数据）  
Data source: Beijing Statistical Yearbook 2022, Beijing Municipal Bureau of Statistics

Add Value of Tertiary Industry as % of GDP: over 80%

## 当代北京城市发展-科技创新 Technology Innovation in Beijing's urban development

研究与试验发展 (R&D) 经费内部支出 (亿元)  
Internal R&D Expenditures (100 million yuan)

Internal R&D expenditure:  
263 billion Yuan



Internal R&D expenditure and Revenue of Independent Innovation Demonstration Enterprises are increasing with years

数据来源：北京统计局（2022年统计数据）  
Data source: Beijing Statistical Yearbook 2022, Beijing Municipal Bureau of Statistics

中关村国家自主创新示范区企业收入 (亿元)  
Revenue of Enterprise in Zhongguancun National Independent Innovation Demonstration Zone (100 million yuan)  
8,440 billion Yuan



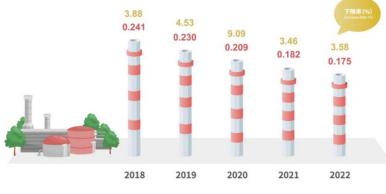
## 交通能源转型 Transportation Energy Transformation

- 截至2021年底，北京新能源汽车保有量达到50.7万辆。2025年新能源汽车累计规模力争达到200万辆的目标
- By the end of 2021, the number of new energy vehicles will reach 507,000. By 2025, the cumulative scale of new energy vehicles will strive to reach the target of 2 million
- 加快智能网联汽车全产业链布局，建设具有全球竞争力的智能网联汽车产业创新发展领先城市
- Accelerate the layout of the whole industrial chain of intelligent connected vehicles, and build a leading city with global competitiveness in the innovation and development of intelligent connected vehicles



## 当代北京城市发展-资源与环境 Resource & Environment in Beijing's urban development

万元地区生产总值能耗 (吨标准煤)  
Energy Consumption per 10,000 yuan of GDP (ton of GCP)



Energy Consumption per 10,000 Yuan of GDP: 0.175 ton of Standard Coal

数据来源：北京统计局（2022年统计数据）  
Data source: Beijing Statistical Yearbook 2022, Beijing Municipal Bureau of Statistics

万元地区生产总值水耗(立方米)  
Water Consumption per 10,000 yuan of GDP: 9.62 cubic metres



Energy and water consumption per 10,000 Yuan of GDP is decreasing year by year

## 当代北京城市发展-资源与环境

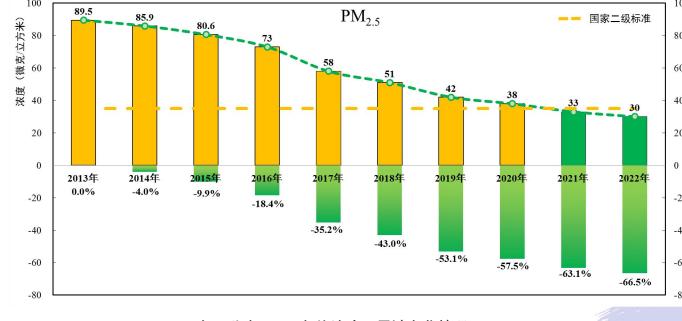
### Resource & Environment in Beijing's urban development

Annual Average Concentration of PM 2.5 is decreasing with years  
Annual Average Concentration of PM 2.5: 30.0 microgram per cubic metre



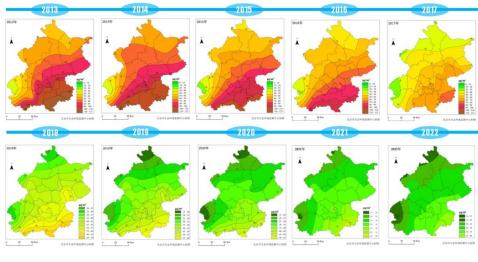
数据来源：北京统计局（2022年统计数据）  
Data source: Beijing Statistical Yearbook 2022, Beijing Municipal Bureau of Statistics

Urban green coverage, Sewage treatment rate, Rate of harmless disposal of domestic waste are increasing with years



2013-2022年，北京PM<sub>2.5</sub>年均浓度及累计变化情况

Annual average PM<sub>2.5</sub> concentration and cumulative change in Beijing from 2013 to 2022



(图7 2013-2022年PM2.5年均浓度空间分布变化)

从空间特点看，2013-2022年，北京市各区域PM2.5浓度整体持续下降

From the perspective of spatial feature, the overall PM2.5 concentration in all regions of Beijing continued to decline from 2013 to 2022

### 百年首钢华丽转身

Gorgeous transformation of  
Century-old Shougang



中国首钢集团始建于1919年，位于长安街西延长线，是800万吨级的大型钢铁企业，全国十大钢铁企业之一，按照北京城市规划，2006年至2010年完成搬迁。新首钢地区成为传统工业绿色转型示范景区、高端产业创新高地、后工业文化体育创意基地。2022年北京冬奥组委所在地。

China Shougang Group was founded in 1919, is located in the Chang'an Street west extension line, is 8 million tons of large-scale iron and steel enterprises, one of the top ten iron and steel enterprises in China, in accordance with the Beijing urban planning, the relocation was completed between year 2005 and 2010. Now, the new Shougang become a demonstration area for the green transformation and upgrading of traditional industries, a high-end industrial innovation highland in the west of Beijing, and a post-industrial culture and sports creative base. It is also the site of the Beijing 2022 Winter Olympic Organizing Committee.

“废旧厂房”变成“艺术区”  
“Old Factory” becomes “Art Zone”  
“Design Park”



798艺术区和751时尚设计广场，位于北京市朝阳区，为北京的文化创意产业集聚区，由退出生产的电子、煤气生产厂房基础上建成。  
798 Art Zone and 751 Design Park, located in Chaoyang District, Beijing, is a cultural and creative industry cluster in Beijing, built on the basis of retired electronics and gas production factory buildings.

“风沙村落”变“城市绿洲”  
“Wind-sand Village” turned into an  
“urban oasis”



温榆河公园位于在朝阳、顺义、昌平三区交界，规划范围30平方公里，是北京最大的“绿肺”。  
At the junction of Chaoyang, Shunyi and Changping districts, Wenyu Park, with a planning area of 30 square kilometers, is the largest “green lung” in Beijing.

## 北京城市空间布局规划 Urban Spatial Layout Planning of Beijing

“一核”：首都功能核心区

“一主”：中心城区

“一副”：北京城市副中心

“两轴”：中轴线和长安街及其延长线

“多点”：位于平原地区的新城，包括顺义、大兴、亦庄、昌平和房山新城等

“一区”：生态涵养区，主要是山水秀丽的北京郊区，包括门头沟区、平谷区、怀柔区、密云区、延庆区，以及昌平区和房山区的山区

**一核一主一副、两轴多点一区**

## 北京城市空间布局规划 Urban Spatial Layout Planning of Beijing

“One Core”：The functional core area of the capital

“One Main”：the central urban area

“One Administrative Center”：Beijing Municipal Administrative Center

“Two Axes”：Central axis and its extension, and Chang'an Avenue and its extension

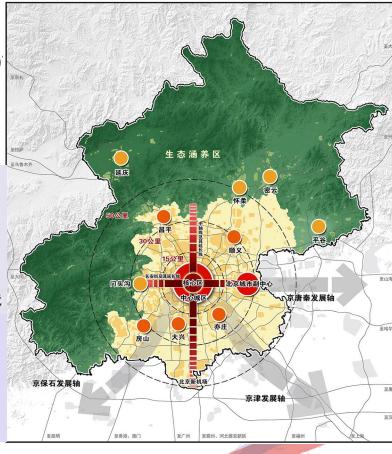
“Multi-Point”：New towns in plain areas, including Shunyi, Daxing, Yizhuang, Changping and Fangshan districts

“One Zone”：Ecological conservation zone, mainly the suburbs of Beijing with beautiful landscapes, including Mentougou, Pinggu, Huairou, Miyun and Yanqing districts, as well as the mountainous areas of Changping and Fangshan districts

**一核一主一副、两轴多点一区**

## 北京城市空间布局规划 Urban Spatial Layout Planning of Beijing

- 一核：首都功能核心区
- 一主：中心城区
- 一副：北京城市副中心
- 两轴：中轴线及其延长线、长安街及其延长线
- 多点：五个位于平原地区的新城
- 一区：生态涵养区
- 位于生态涵养区的新城



## 北京的世界文化遗产 World Culture Heritages in Beijing



故宫（紫禁城） The Former Imperial Palace (Forbidden City)



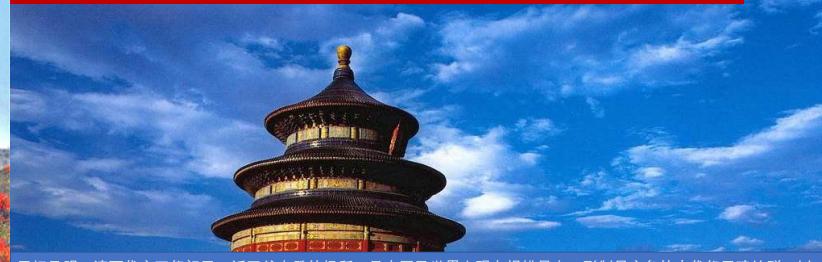
中国明清两代的皇家宫殿，旧称紫禁城，位于北京中轴线的中心。世界上现存规模最大、保存最为完整的木质结构古建筑之一。始建于明成祖永乐四年（1406年），1420年建成。1987年，故宫被列入世界文化遗产。  
Also known as the Forbidden City, it is the imperial palace of the consecutive Ming (1368–1644) and Qing (1644–1911) dynasties of China, located in the center of the central axis of Beijing, is one of the existing largest and the most well-preserved ancient wooden structures in the world, was built in the 4th year of Yongle emperor, Ming Dynasty (1406), completed in 1420. It was listed as a World Cultural Heritage site in 1987.

## 长城 The Great Wall



长城是中国也是世界上修建时间最长、工程量最大的一项古代军事防御工程。自西周时期开始，延续不断修筑了2000多年，分布于中国北部和中部的广大土地上，总计长度达2万多千米。1987年长城被列入世界文化遗产。  
The Great Wall is an ancient military defense project with the longest construction time and the largest engineering quantity in China and the world. Since the Western Zhou Dynasty, it has been continuously built for more than 2,000 years, covering a vast area of northern and central China, with a total length of more than 20,000 kilometers. It was listed as a World Cultural Heritage site in 1987.

## 天坛 Temple of Heaven



天坛是明、清两代帝王祭祀天、祈五谷丰登的场所，是中国及世界上现存规模最大、形制最完备的古代祭天建筑群，以严谨的建筑布局、奇特的建筑构造和瑰丽的建筑装饰著称于世。始建于明永乐十八年（1420年）。1998年被列为“世界文化遗产”。  
The Temple of Heaven is a place for emperors of Ming and Qing dynasties to worship heaven and pray for grain and abundance. It is the largest and most complete ancient architectural complex of worship to heaven in China and the world. First built in the 18th year of Yongle emperor, Ming Dynasty (1420). It was listed as a World Cultural Heritage site in 1998.

## 颐和园 The Summer Palace



颐和园是中国清朝时期皇家园林，同时也是中国最大也是保存最完整的皇家园林，被誉为“皇家园林博物馆”。它坐落在北京西郊，始建于公元1750年，1860年在战火中严重损毁，1886年在原址上重新进行了修缮。1998年11月被列入《世界遗产名录》。

The Summer Palace is the imperial garden of Qing dynasty and is the largest and the best-preserved imperial garden in China, known as the "Museum of Imperial Gardens". It's located in the western suburb of Beijing, was first built in 1750, and was badly damaged during the war in 1860, then rebuilt on the original site in 1886. It was listed as a World Cultural Heritage site in 1998.

## 明十三陵 The Ming Tombs



明十三陵是明朝迁都北京后，13位皇帝陵墓的皇家陵寝的总称。体现了中国封建社会的最高丧葬制度和千百年中国封建社会的宇宙观、生死观和道德观，也体现了当时中国最高水平的规划思想和建筑艺术。2003年，明十三陵被列入《世界遗产目录》。

The Ming Tombs are the general name for the royal tombs of the 13 emperors of the Ming Dynasty after the capital was moved to Beijing. It embodies the highest funeral system and the cosmology, life and death and morality of Chinese feudal society, as well as the highest level of planning thought and architectural art in China at that time. The Ming Tombs were listed as a World Cultural Heritage site in 2003.

## 周口店北京人遗址 Peking Man Site at Zhoukoudian



位于北京市房山区周口店龙骨山。考古学家开始在这里发现了距今约60万年前的一个完整的猿人头盖骨，定名为北京猿人。是世界上迄今为止人类化材料最丰富、最生动、植物化石门类最齐全、而又研究最深入的古人类遗址。1987年被列入《世界文化遗产名录》。

Peking Man Site is located in Zhoukoudian Longgu Mountain, Fangshan District, Beijing. Archaeologists found a complete ape-man skull dating back about 600,000 years, named Peking man. It is the most vivid and the most intensively studied ancient human site in the world with the most abundant human fossil materials and the most complete class of plant fossils. It was listed as a World Cultural Heritage site in 1987.

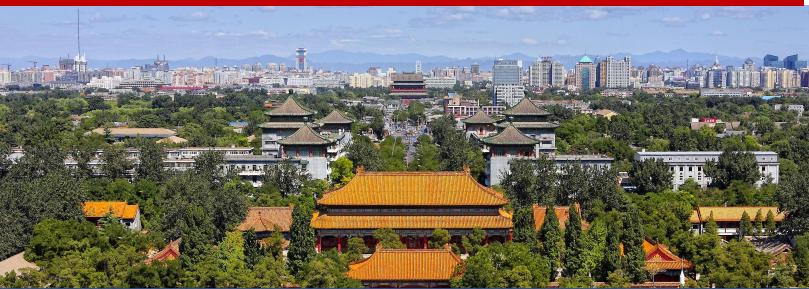
## 大运河 The Grand Canal



京杭大运河始建于春秋时期，开凿到现在已有2500多年的历史，是历经世界上里程最长、工程最大的古代运河，也是最古老的运河之一，并且使用至今。大运河南起余杭（今杭州），北到涿郡（今北京），全长约1797公里。运河对中国经济南北地区之间的经济、文化发展与交流，特别是对沿线地区工农业经济的发展起了巨大作用。2014年，中国大运河入选《世界文化遗产名录》。

The Grand Canal was built in the Spring and Autumn Period. It has a history of more than 2,500 years. It is the longest and largest ancient canal in the world and one of the oldest canals, and has been in use until now. The Grand Canal started at Yuhang (today's Hangzhou) in the south and reached Zhuojun (today's Beijing) in the north, with a total length of about 1797 kilometers. The canal has played a great role in the economic and cultural development and exchanges between the north and south of China, especially in the industrial and agricultural economic development along the route. It was listed as a World Cultural Heritage site in 2014.

## 北京中轴线 The Central Axis of Beijing



始建于13世纪，形成于16世纪，距今已有700多年历史

北京城市东西对称布局建筑物的对称轴，直线距离长约7.8公里，世界上现存最长的城市中轴线

It was founded in the 13th century and formed in the 16th century, with a history of more than 700 years

It's the north-south central axis of symmetry for the east-west layout of the building in Beijing, with a linear distance of about 7.8 kilometers, and is the longest existing urban axis in the world



京津冀协同发展

Coordinated Development of  
Beijing-Tianjin-Hebei Region



## 京津冀协同发展 Coordinated Development of Beijing-Tianjin-Hebei Region

jīng

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jì

北京 Beijing

天津 Tianjin

河北 Hebei



中国国家“十三五”规划指定的三大国家发展战略之一 One of the three national development strategies specified in China's 13th Five-Year Plan

核心是有序疏解北京非首都功能 The core is to relieve non-capital functions of Beijing in an orderly manner

## 京津冀三地功能定位 Functional Orientation of Beijing, Tianjin and Hebei

北京 Beijing

- 全国政治中心
- 文化中心
- 国际交往中心
- 科技创新中心

天津

- 全国先进制造研发基地
- 北方国际航运核心区
- 金融创新运营示范区
- 改革创新先行示范区

河北

- 全国现代商贸物流重要基地
- 产业转型升级试验区
- 新型城镇化与城乡统筹示范区
- 京津冀生态环境支撑区

## 京津冀三地功能定位 Functional Orientation of Beijing, Tianjin and Hebei

北京 Beijing

- Political Center
- Cultural Center
- International Exchange Center
- Science and Technology Innovation Center

天津 Tianjin

- Advanced manufacturing research and development base
- North international shipping core zone
- Financial innovation operation demonstration zone
- Reform pilot demonstration zone

河北 Hebei

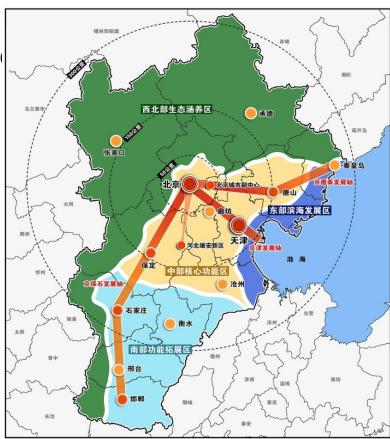
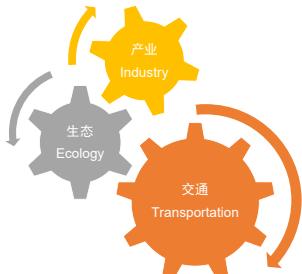
- An important modern trade and logistics base
- Industrial transformation and upgrading pilot zone
- New-type urbanization and urban-rural integration demonstration zone
- Beijing-Tianjin-Hebei ecological environment support area

## 建设目标：世界级城市群建设 Goal: Construction of World-class City Clusters



## 京津冀协同发展 Coordinated Development of Beijing-Tianjin-Hebei Region

优先发展领域  
Priorities for development



## 优先发展领域 Priorities for development—— 区域交通一体化 Regional transportation integration



## 优先发展领域 Priorities for development——

### 生态环境协同治理 Ecological Environment Collaborative Governance

- 改善区域空气质量  
Improve regional air quality
- 治理水环境、保护水生态  
Control water environment pollution and protect water ecology
- 共建绿色生态空间  
Build a green ecological space

## 优先发展领域 Priorities for development——

### 区域产业协作和转移 Regional Industrial Cooperation and Transfer

- 协同优势产业链：汽车、新能源装备、智能终端、大数据、生物医药等  
Synergistic advantage industry chain: automobiles, new energy equipment, intelligent terminals, big data, biomedicine, etc.
- 科技创新成果转化  
Scientific and technological innovation achievement transformation

### 京津冀协同发展与2022年北京冬奥会

Coordinated Development of Beijing-Tianjin-Hebei Region and Beijing 2022 Olympic and Paralympic Winter Games



北京：首个双奥之城  
Beijing: The first city that has hosted both Summer and Winter Olympic Games

### 京津冀协同发展与2022年北京冬奥会

Coordinated Development of Beijing-Tianjin-Hebei Region and Beijing 2022 Olympic and Paralympic Winter Games



### 京津冀协同发展与2022年北京冬奥会

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### 京津冀协同发展与2022年北京冬奥会

Coordinated Development of Beijing-Tianjin-Hebei Region and Beijing 2022 Olympic and Paralympic Winter Games

#### 交通一体化 Transportation integration

1小时交通圈 1 hour traffic circle



## 京津冀协同发展与2022年北京冬奥会 Coordinated Development of Beijing-Tianjin-Hebei Region and Beijing 2022 Olympic and Paralympic Winter Games

### 产业协作 Industry collaboration

积极推动区域间在冰雪产业尤其在冰雪装备制造、新能源、高科技术等冬奥+领域的合作，着力打造互补互促的产业体系  
Promote inter-regional cooperation in the ice and snow industry, especially in ice and snow equipment manufacturing, new energy, high-tech industries and other fields, and strive to build a complementary and mutually reinforcing industrial system



### 案例 Case

通过张北柔性直流电网工程和跨区域绿电交易机制，奥运会历史上首次实现所有场馆100%使用可再生能源供电  
For the first time in the history of the Olympic Games, all venues is powered by 100% renewable energy through the Zhangbei Flexible DC Grid Project and the Inter-regional Green Power Trading Mechanism

## 京津冀协同发展与2022年北京冬奥会 Coordinated Development of Beijing-Tianjin-Hebei Region and Beijing 2022 Olympic and Paralympic Winter Games

### 环境协同治理 Collaborative environmental governance

#### 绿色办奥理念

以治气、治沙、治水为重点，推动区域生态  
环境联防联治  
Focusing on controlling air pollution, desertification and water, promote joint prevention and control of the ecological environment in the whole regions



## 京津冀协同发展与2022年北京冬奥会 Coordinated Development of Beijing-Tianjin-Hebei Region and Beijing 2022 Olympic and Paralympic Winter Games

### 公共服务共建共享 Public Services Co-construction and Sharing

加大在通信设施、住宿餐饮、医疗服务、教育等多方面的投入  
Increasing investment in communication facilities, accommodation, catering, medical services and education



### 案例 Case

北京大学第三医院与张家口政府合作，升级崇礼区人民医院为北医三院崇礼院区，成为河北省唯一一家区域医疗中心  
Peking University Third Hospital cooperated with Zhangjiakou government to upgrade Chongli District Hospital to Peking University Third Hospital (Chongli Department), becoming the only regional medical center in Hebei Province

## 思考题 Questions

- 比较北京城市发展与你的国家首都城市发展的异同.  
• Please compare the urban development of Beijing with that of the capital city of your home country.

## 课后复习 Review

- 在新版北京城市总体规划中，北京的城市功能定位是什么？并就其中的一个方面进行说明。What are the urban function orientations of Beijing in the latest edition of Beijing's urban master planning? And illustrate one aspect of them.
- 请举例说明北京城市规划中的减量发展。Please illustrate the reduction development in Beijing's urban planning.
- 请举例说明北京冬奥会对中国京津冀协同发展的促进作用。Please illustrate how Beijing Winter Olympics has promoted the coordinated development of Beijing, Tianjin and Hebei region.