



Genes build the future

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BGI Europe

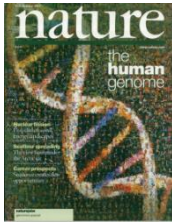


1. *Who we are?*
2. *What we are doing?*
3. *Our experiences in China*
4. *Our vision in Europe*



1 Who we are?

From 1% to World Leading



The first Human Genome Project
1999 - 2001
BGI Contributed 1%



International HapMap Project
2002 - 2005
BGI Contributed 10%



The First Asian Genome Map
2007 - 2008
BGI Delegated 100%



Thousand Genome Project
2008 - 2012
BGI Initiated



Personal Genome Project
2013 -
BGI version to give
all new born a personal genome.

12 years
 200 scientific research papers
 58 published on top-tier international academic journals



Technology PUBLISHED BY MIT Review

50 DISRUPTIVE
COMPANIES 2013

MIT's Genome Machine
Ranks 1st in 5 Factor
MIT's Genome Machine
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Ranks 1st in 5 Factor



BGI Named to MIT Technology

Review's 2013. 50 Disruptive
Companies List Recognizing
World's Most Innovative
Companies

FAST COMPANY

MOST INNOVATIVE COMPANIES 2013

THE WORLD'S TOP 10 MOST INNOVATIVE COMPANIES
IN CHINA

Fast Company

BGI Ranked 4th
of Fast Company's 2013
The World's Top 10 Most
Innovative Companies
in China



BGI Model

BGI

Large Platform

Trans-Omics



Collaborations

Globalization



Local Resources

Bio-Gene Bank



Big Science



Innovation Industry



7 Divisions:

- BGI Research
- BGI College
- **BGI Tech Solution**
- **BGI Diagnosis**
- **BGI Agriculture**
- BGI Health
- BGI Cloud

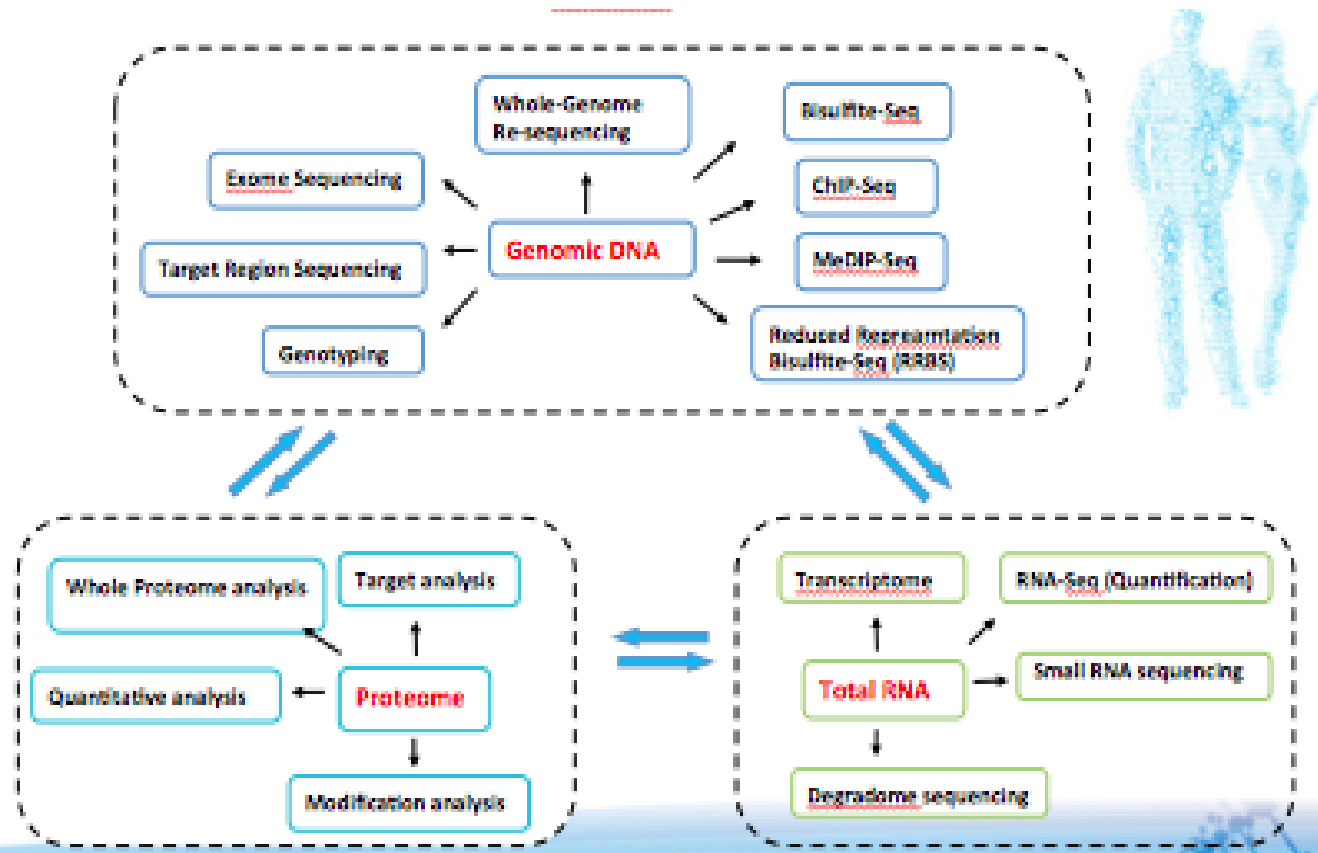


2. What we are doing?

BGI Tech Solution

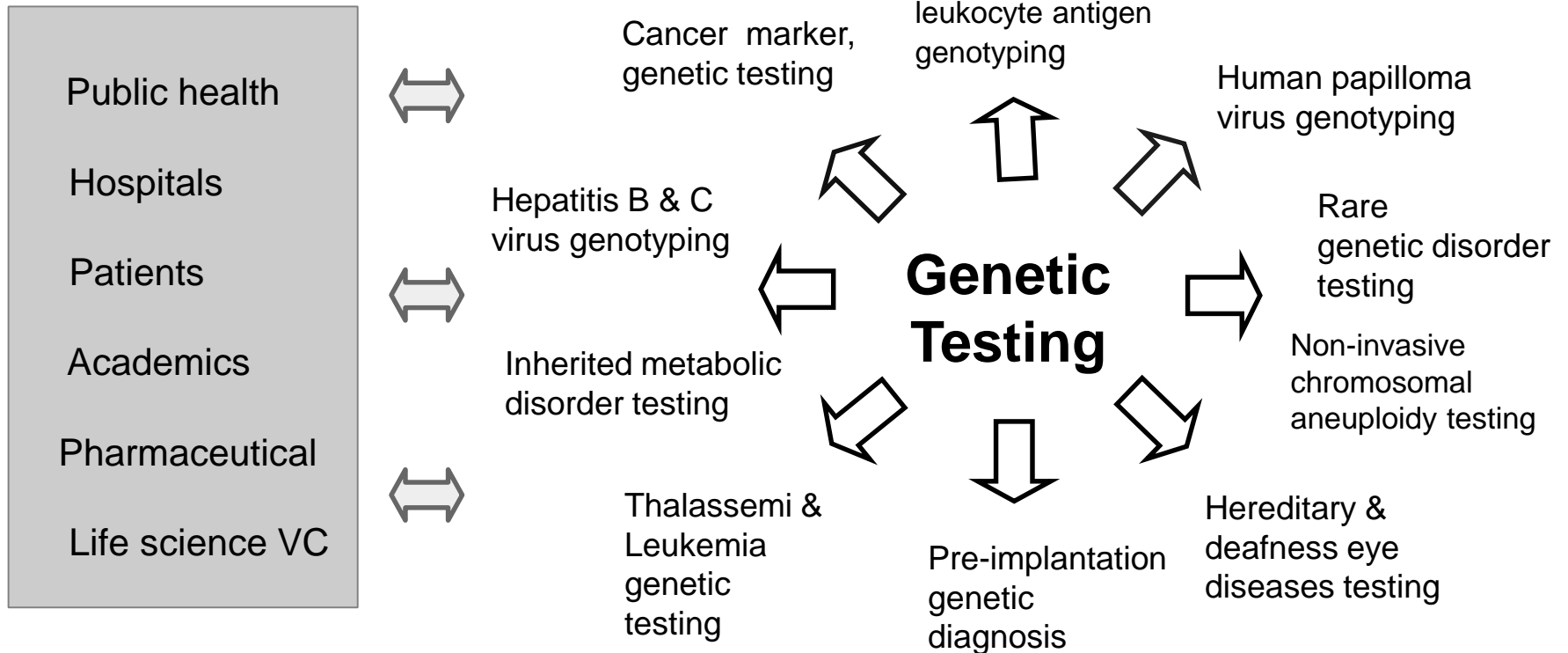
Provide cross-genomics research solutions for scientists around the world

- Market value CNY 3.3 billion
- More than CNY 10 Billion after IPO within 3 years



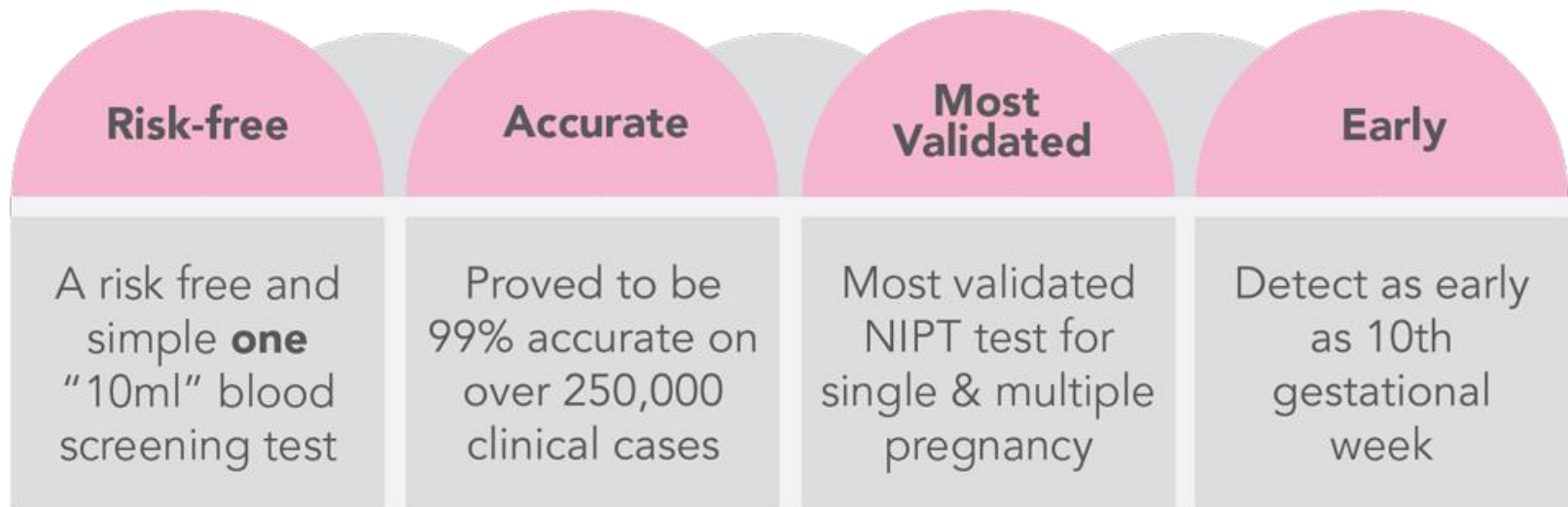
BGI Diagnosis:

Life Cycle Service & Partnership



BGI Diagnosis Demo case:

NIFTY Non-invasive Fetal Trisomy Test

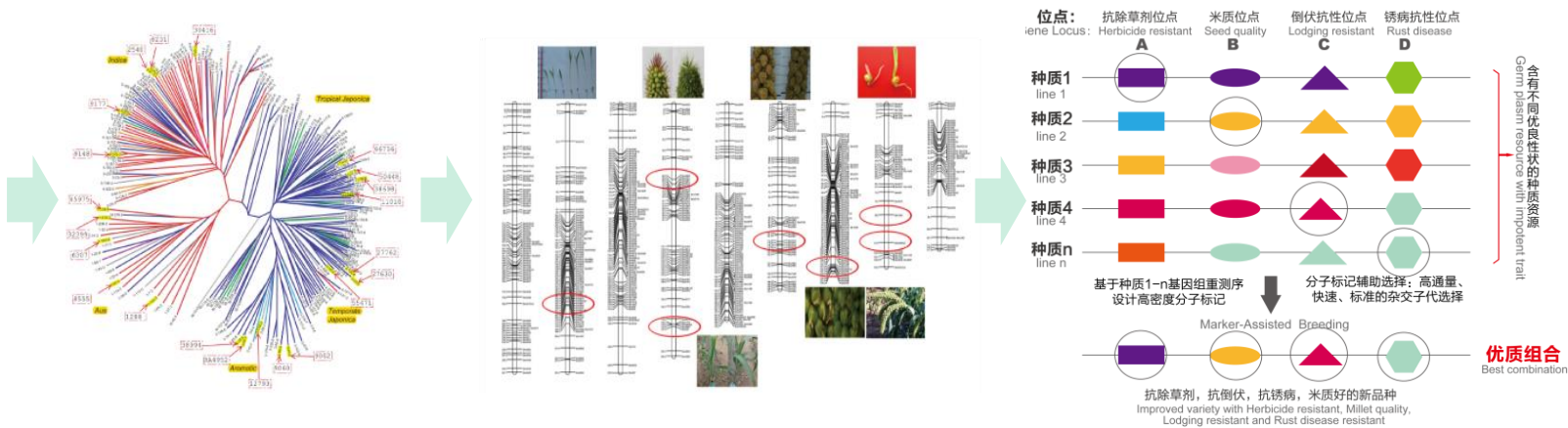
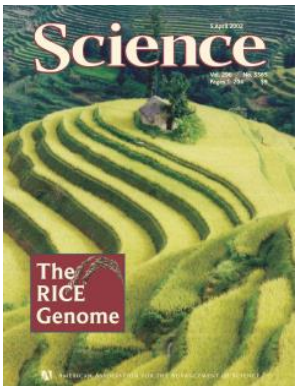


10,000 NIFTY tests have been done in Europe including Western, central, eastern European counties

BGI Agriculture:

- Provide sustainable and high-performance cultivars based on advanced-omics technologies
- A new industry chain of biological agriculture

Modern Breeding Strategy



Genome
de novo

Phenotype
Resequencing

Gene Discovery
Function

Multi-alleles engineer
Breeding

--Selection based on genome information

Animal Breeding

Animal disease model



Pigs with Alzheimers



Transgenic pig: Bama mini-pigs



Transgenic pig: Tibetan mini-pigs

Marine Life Platform



Hybrid grouper

Common grouper(livedo)



Conotoxin

The growth rate of hybrid grouper is 3 times faster than common grouper, and it tastes better.

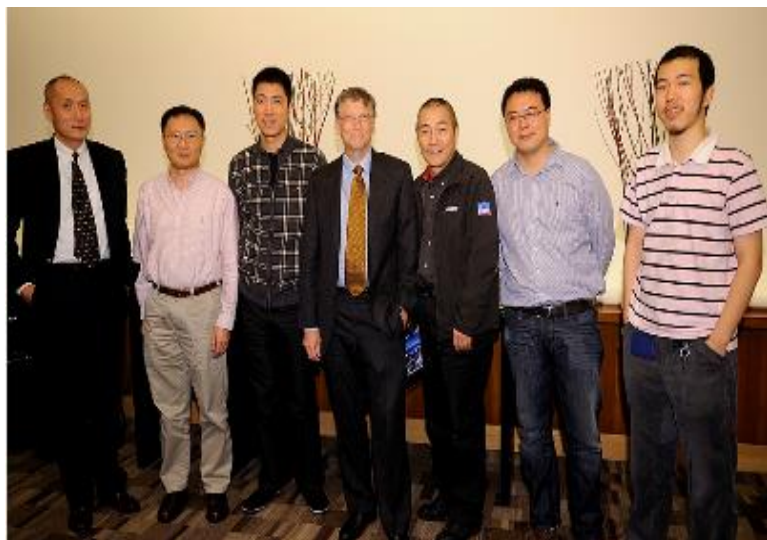
Our partners

>2000 institutions, >15000 collaborators



华大基因
BGI
For a better life

BGI and the Bill & Melinda Gates to Establish Comprehensive Strategic Partnership



Our social responsibility

Germany deadly *E. coli* Program

- June 2, 2012, BGI completed the genome sequencing and released the data;
- June 7, the diagnostic kit was developed and freely available world-wide



The NEW ENGLAND
JOURNAL of MEDICINE

BRIEF REPORT

Open-Source Genomic Analysis of Shiga-Toxin–Producing *E. coli* O104:H4

Holger Rohde, M.D., Junjie Qin, Ph.D., Yujun Cui, Ph.D., Dongfang Li, M.E., Nicholas J. Loman, M.B., B.S., Moritz Hentschke, M.D., Wentong Chen, B.S., Fei Pu, B.S., Yangqing Peng, B.S., Junhua Li, B.E., Feng Xi, B.E., Shenghui Li, B.S., Yin Li, B.S., Zhaoxi Zhang, B.S., Xianwei Yang, B.S., Meiru Zhao, M.S., Peng Wang, B.M., Yuanlin Guan, B.E., Zhong Cen, M.E., Xiangna Zhao, B.S., Martin Christner, M.D., Robin Kobbe, M.D., Sebastian Loos, M.D., Jun Oh, M.D., Liang Yang, Ph.D., Antoine Danchin, Ph.D., George F. Gao, Ph.D., Yajun Song, Ph.D., Yingrui Li, B.S., Huanming Yang, Ph.D., Jian Wang, Ph.D., Jianguo Xu, M.D., Ph.D., Mark J. Pallen, M.D., Ph.D., Jun Wang, Ph.D.,



华大基因
BGI

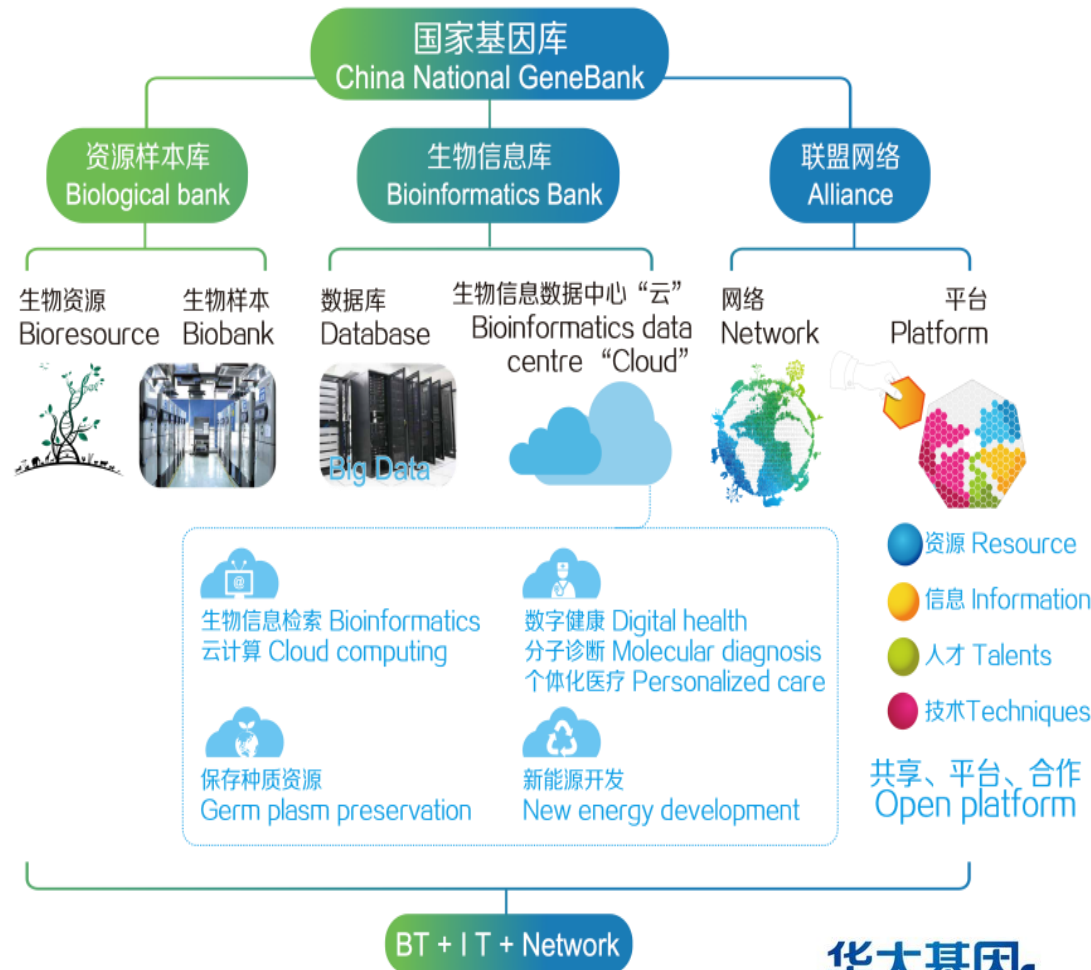
For a better life



3. Our experiences in China

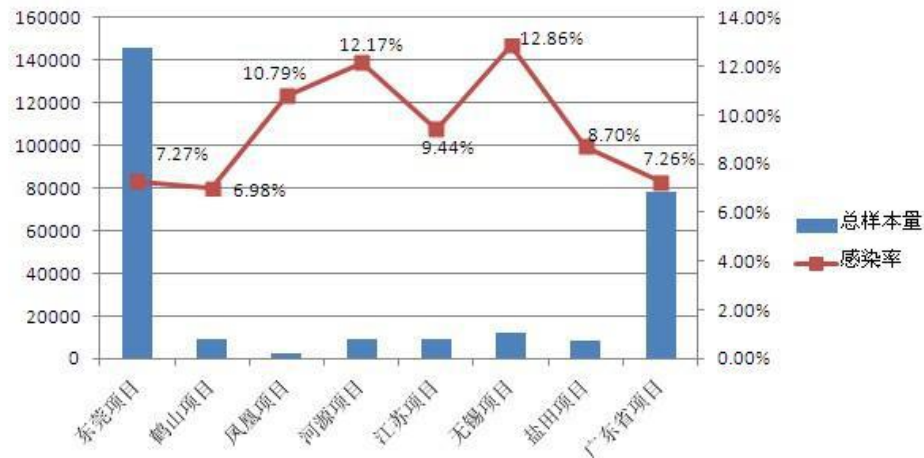
Case 1. National GeneBank

- Own by Government
- Manage by BGI
- Create open platform
- Integrate resources:
BT + IT + Network



Case 2. HPV population screening

- *Local government reimbursement*
- *Collaborated with local partners*
- *BGI provide high-through put screening solution*
- *Cover 1 Million female population*
- *600,000 tests done*



Case 3. Shenzhen International Biobay

- *Establish by Shenzhen local government*
- *Create special Bio-economic Zone*
- *Apply flexible regulation system to accelerate world-class healthcare solution development*
- *Apply flexible immigration law to attract international talent*
- *BGI's roles*
 - Key Opinion Leader*
 - Stakeholder*
 - Value Chain Integrator*

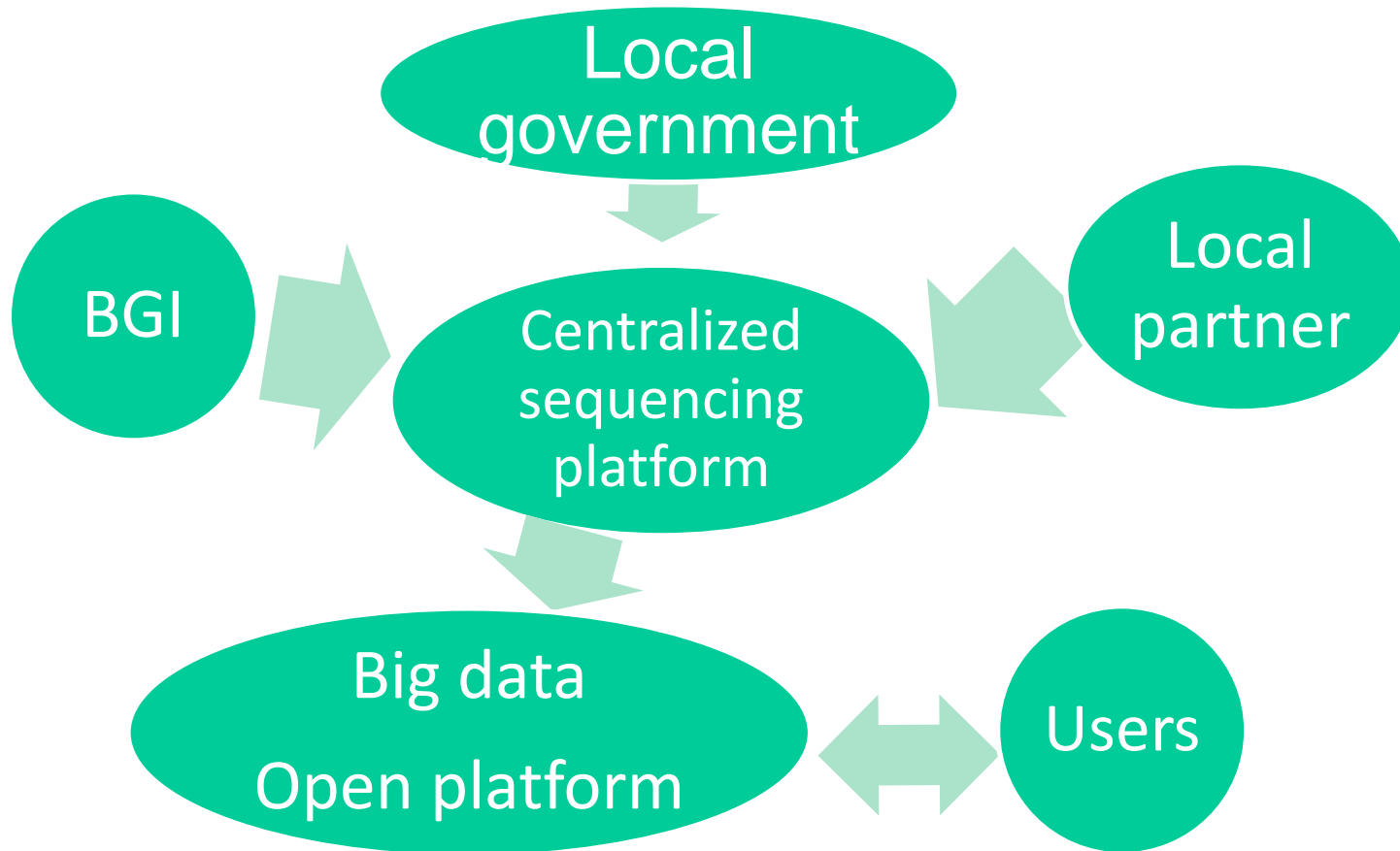




4. Our vision in Europe

In country for country

- National healthcare system
- National food and agriculture system

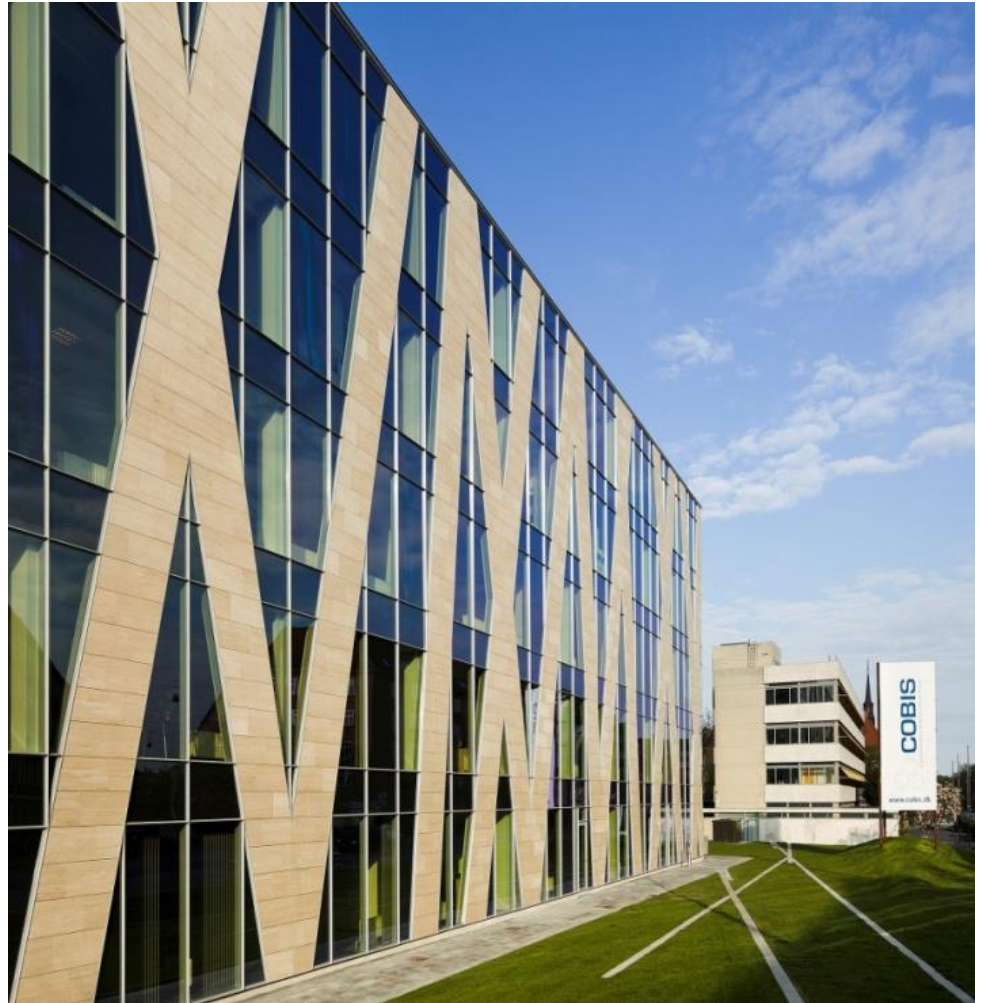


Bridging European Bio-industry with Chinese Bio-industry



**BGI European
headquarter
in Copenhagen**

**BGI Europe A/S
registered in
2010 May**





2012 February

BGI Europe Lab launch

BGI and HTF co-investment 140M DKK

Joint-Ph.D program with KU, AU,DTU, SDU

BGI European Headquarter in Copenhagen



Demo case 1: GenomeDenmark



Welcome to the Danish Platform
for Large-scale Sequencing and Bioinformatics

- From April, 2012, until next 3~5 years
- Sequence 1% of Danish Population (50,000)
 - Digital BioBank for Local Clinical Genetic Researches
 - Healthy population data for further Disease Researches
 - Developing New Algorithm for Population data analysis

Demo case 2: BGI and Novo Nordisk Global Collaboration Framework

Novo Nordisk and BGI jointly announced they have reached an agreement to establish a global collaboration framework, which provides an unprecedented collaborative opportunity for Novo Nordisk and BGI to accelerate their growth, execute their global partnering strategy and support disease research and development efforts.

--March 2, 2012



BGI in Czech Republic

2012 June

✓ Get to know Czech Republic

2012 September

✓ First visit to Czech Republic

2012 December

✓ Czech Rep. delegates visit BGI
Shenzhen



Demo case 1:

GENNET BGI joint clinical lab



Demo case 2:

BGI and CCP collaboration



Czech Centre for Phenogenomics





Genes build the future!
Let's build the future together!

For a better life

Thank you