



# Company Introduction

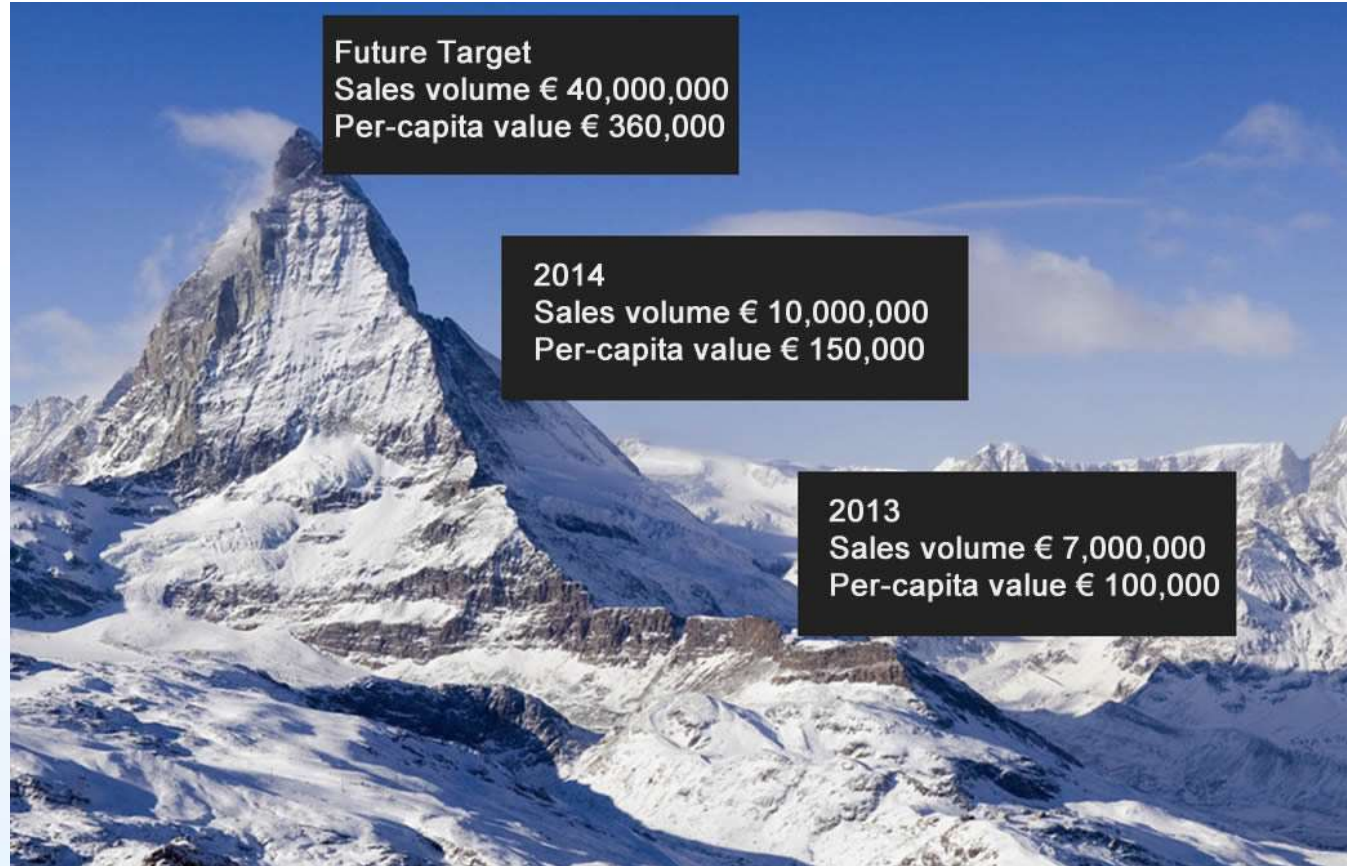
Huaray Precision Laser Co., Ltd. is a professional manufacturer of DPSS Lasers, founded by the doctor of physics in 2009 who has been engaged in American laser industry for more than 20 years, which specializes in R&D and production of all solid-state lasers. The full series of Huaray lasers have fully independent intellectual property rights.

Huaray adhering to the "Convergence of global intelligence to achieve Chinese intelligent made" concept and keep looking for technical resources on a global scale. Through close cooperation with international leading components vendors as well as continued process of optimization and innovation, Huaray achieve high reliability of the mass production and delivery in China.



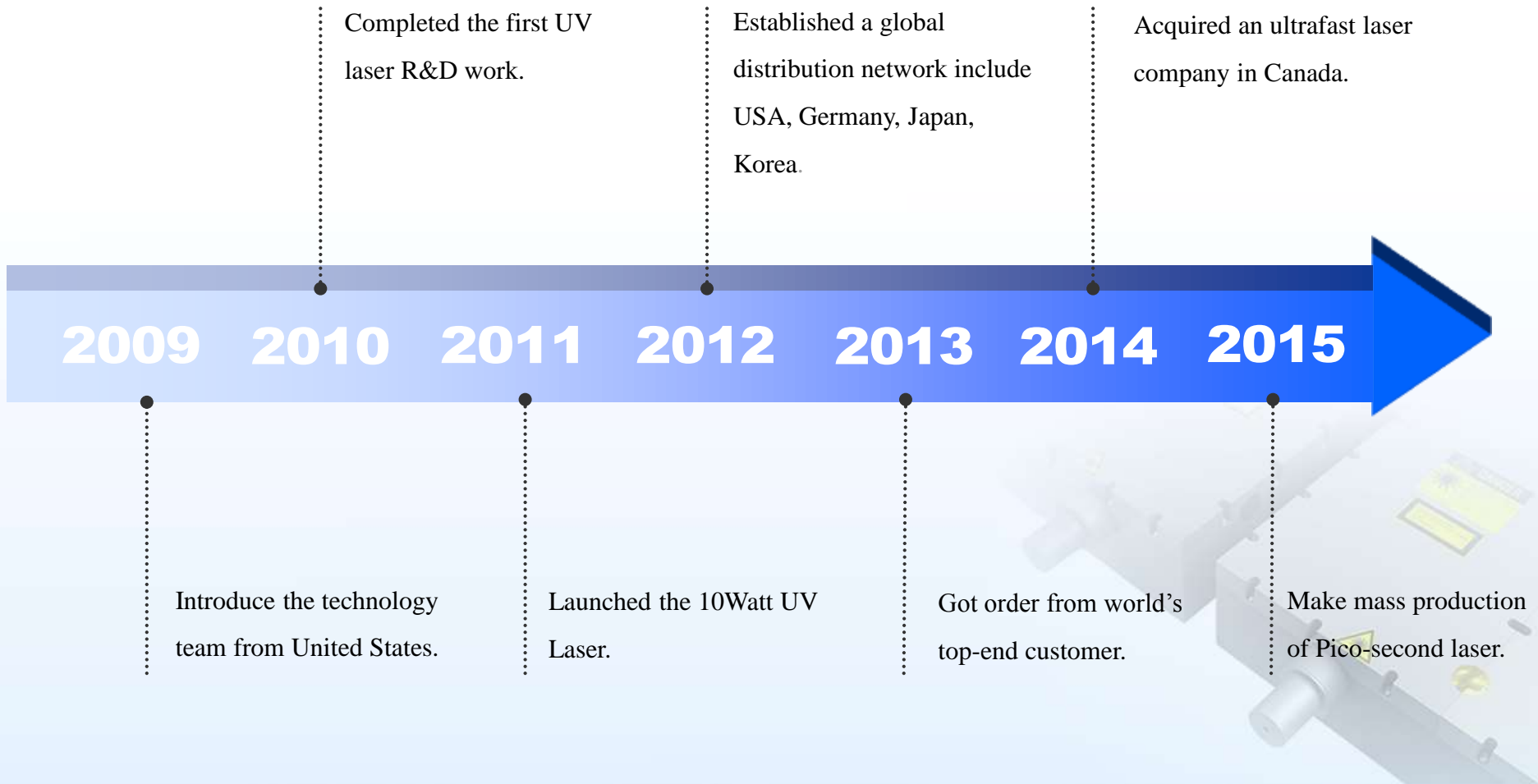
## Business goals:

110 employee,  
sales amount reach  
40 million euro/year



- **Staffs Number:** 70
- **Main Products:** 1-10W Nano-second DPSS lasers  
1-50W Pico-second DPSS lasers
- **Maximum Capacity:** 200 sets/month for Nano-second lasers  
60 sets/month for Pico-second lasers
- **R&D Center:** Wuhan China, Toronto Canada
- **Service Network:** Toronto Canada, Seoul Korea,  
Shenzhen China, Suzhou China
- **Industrial Experience:** Manufactured more than 3000 sets DPSS lasers







Mr Xu Jinling, PhD of Chinese Academy of Sciences,  
Senior Engineer.

Thousand Talents program expert.

Professional R&D Team, 20 Person

Professional Optical Engineer Team, 20 Person

Professional Service Team, 15 Person





UV Laser  
1W/3W/5W



Mass Production  
of  
UV Laser



Research high  
Power UV Laser



2009

2010

2011

2012

2013

2014

2015

Green Laser  
4W/7W/10/20  
W

UV Laser  
8W/10W



- Attodyne was founded in 2006 from a group at the University of Toronto.
- Several laser patents, including high power disk laser technology.
- In 2010 a strategic decision to develop and market an industrial picosecond laser.
- In 2014, Attodyne joined the Huaray family, and become a Huaray ultrafast laser research and development center of North America.







**Prof. Dwayne Miller**

Professor in Physics and  
Chemistry Univ. of Toronto,  
Founding director Institute of  
optics, Univ. of Toronto.



**Michael Cowan**

Ph.D. Physics Univ. of  
Manitoba (2001); NSERC  
Post-Doctoral Fellow (2002)  
NRC Holmes Fellow (2005)



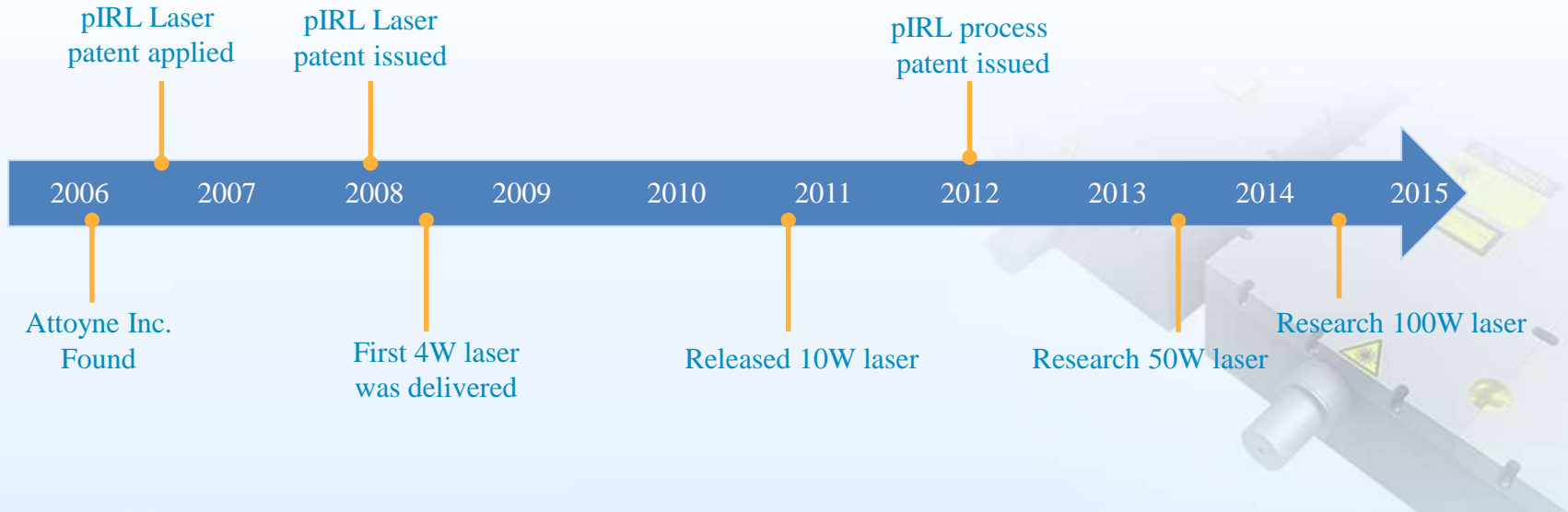
**Darren Kraemer**

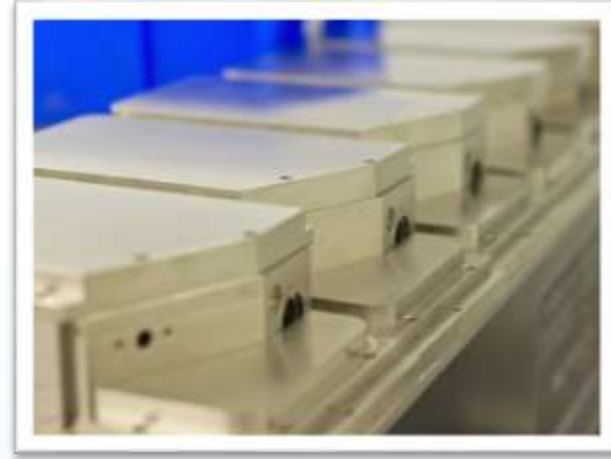
B.A.Sc., M.Sc, PhD  
Chemistry Univ. of Toronto.  
NSERC Innovation  
Challenge Award CIPI  
Young Photonic  
Innovator



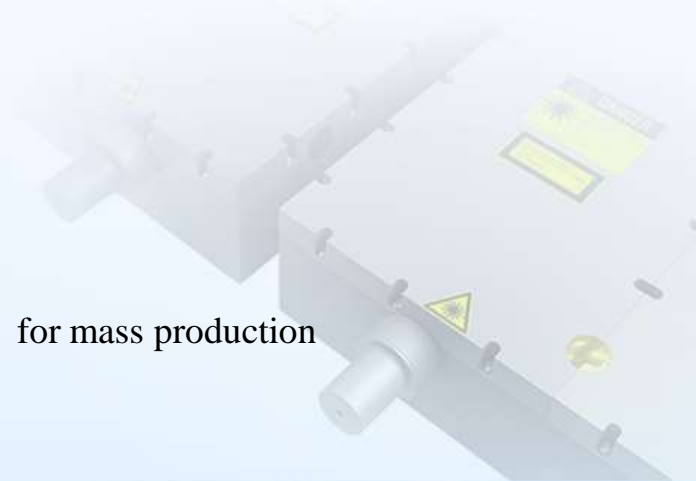
**Renzhong Hua**

B..Sc. National University  
of Defense Technology,  
China (1991), Ph.D.  
Shanghai Institute of  
Science and fine  
Mechanics, (1997)



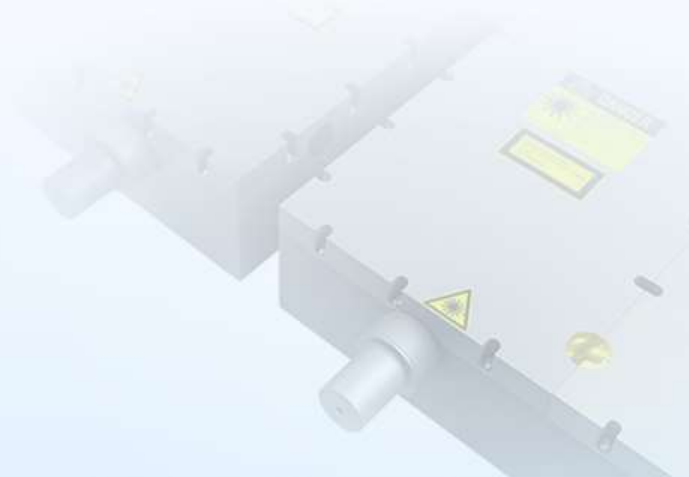


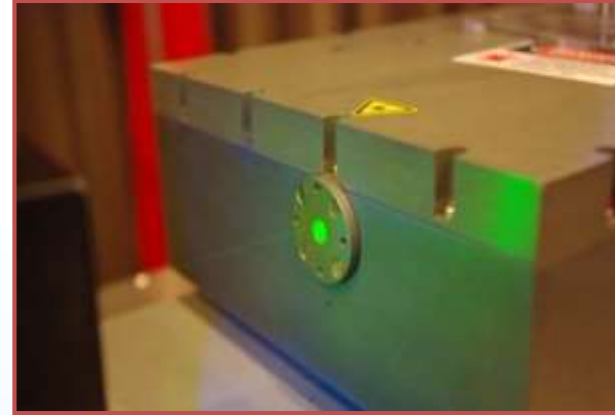
- ◆ 600m<sup>2</sup> super-clean room
- ◆ Capable to produce pico-second laser 720sets/year
- ◆ Capable to produce nano-second laser 2400sets/year
- ◆ Strict manufacturing system keep high reliability and uniformity for mass production



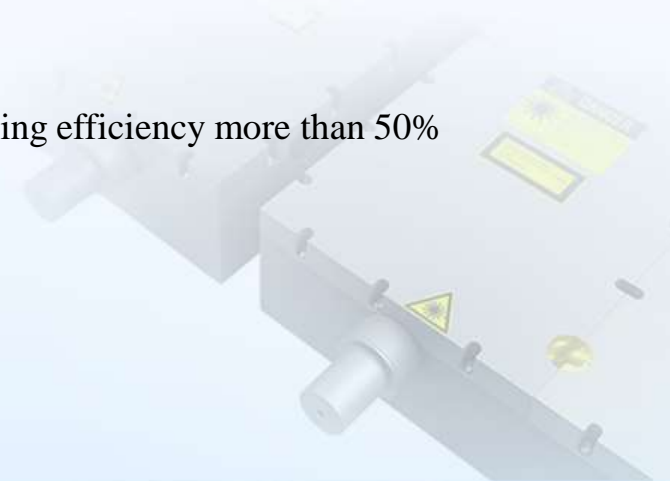


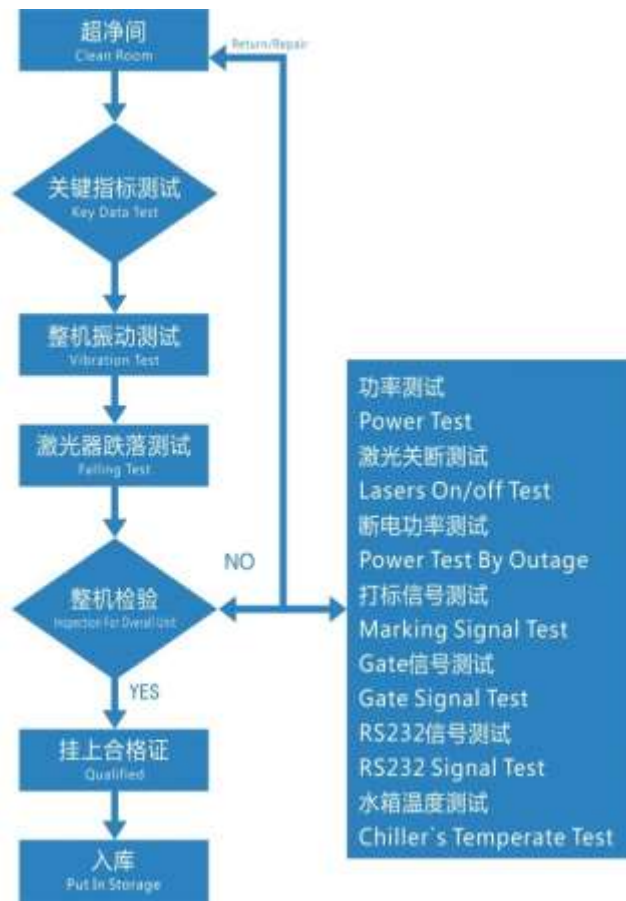
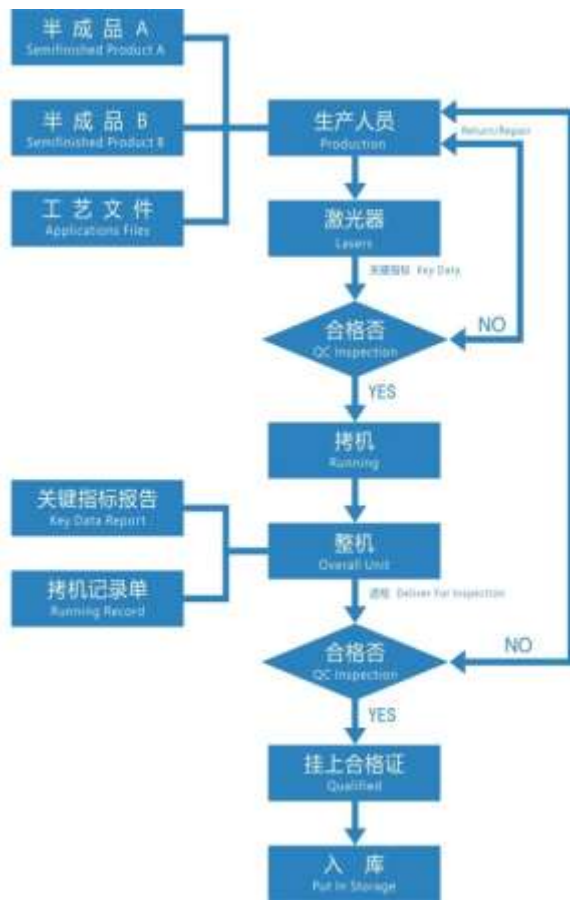
- Compact and Robust industrial  $< 10$  ps laser platform.
- Diode pumped, solid-state air-cooled MOPA design.
- Easy setup and integration, 24/7 operation.
- Power up to 10W@1064nm, Energy up to 1 mJ.
- Multiple Wavelength combinations: visible, UV, mid-IR.





- Diod pumped, all solid state intra cavity technology, frequency doubling efficiency more than 50%
- Excellent beam quality,  $M^2 < 1.1$ , beam roundness  $> 95\%$
- Output 9mm beam spot, enhanced system integration efficiency





## All products are certified by CE certification



- ✓ Global service network. Professional optical engineer rapid diagnosis, service by your side, to get rid of the past for a long time maintenance.
- ✓ With laser regular maintenance services, we can use remote control technology to diagnose lasers.
- ✓ Provide after sales service week turnaround, let the customer loss to a minimum.





## **Repair Center**

Wuhan China

Seoul Korea

Toronto Canada

Shenzhen China

Suzhou China



# 小细节 大执着

Always focus on small details

态度，决定品质  
小如螺丝，也是一件大事情

The attitude decides high quality  
Even small as a screw, it would be a big deal

## 謝謝聆聽！

*Thanks for your attention !*

