

# ChinaRAP Survey and Data Collection



Dr Tiejun ZHANG  
tj.zhang@rioh.cn



**ChinaRAP**  
CHINA ROAD ASSESSMENT PROGRAM



北京中交华安科技有限公司  
BEIJING ZHONGJIAOHUA'AN TECHNOLOGY Co., LTD.

寿县

S12

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**About ChinaRAP:**

**Vision: China free of high risk roads**

**Team composition: a core team of 20 staff, part of RIOH group**

**A collaboration between RIOH and iRAP**

**System solutions (static and dynamic) to traffic safety management, design improvement, facilities application, traffic risk monitoring and intervention**

**Coverage of expressway, national and provincial, rural road, urban roads**

**Road assessed 300,000km+ , 28 provinces in China, 6 countries**

G40  
全椒县

合肥市

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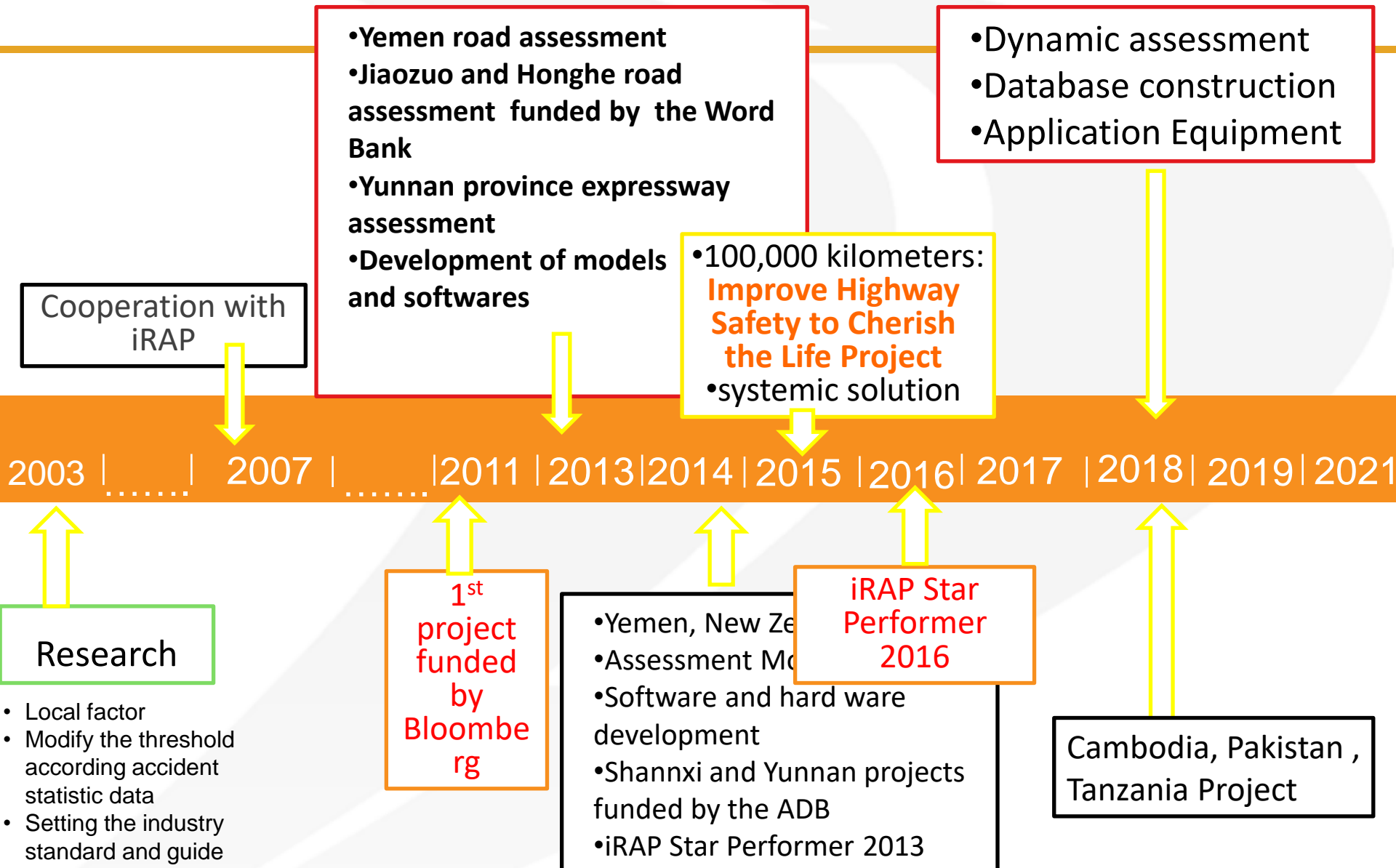
巢湖市



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# ChinaRAP Development



# ChinaRAP Application Scenarios

## Policy making

- Highway Safety to Cherish Life Project (HSEPI' s safety goal: to eliminate high risk roads (level 4 and 5) gradually

## Road network management

- HSEP II regional road assessment and risk identification for current road, road safety funds allocations.
- Regional speed management projects

## Engineering FSR supports

- ADB Unlocking Innovation for Development project
- HSEP new roads FSR benefits analysis

## Guide Design

- Interactive safety design tools and safety-oriented, economic analysis adopted in WB, ADB, HSEP II and regional road infrastructure improvements projects.

## Assessment

- HSEP II post construction assessment
- Effectiveness of countermeasures

# Data Collection, Management and Analysis

Data  
collection  
systems

Data  
management  
systems

Multisource  
Data

## Data Collection Systems

1. Portable Survey Equipment
2. High Precision Survey Equipment

## Data Management Systems

1. Road Asset Management System
2. Road Risk Assessment System

## Multisource data

- ✓ Road crash data, from police, medical record, road asset management office
- ✓ Road infrastructure data
- ✓ Other supporting data

# FIRST (Fast Interactive Road Survey Tool) – Portable model

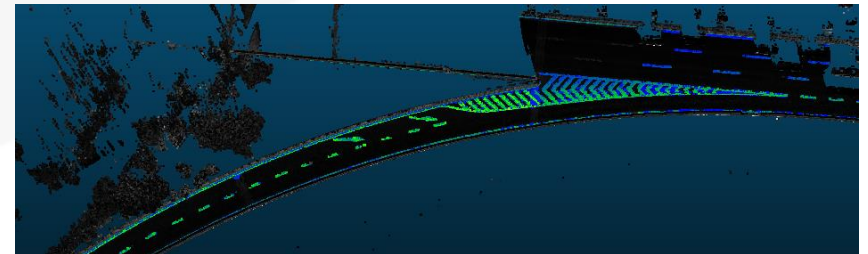
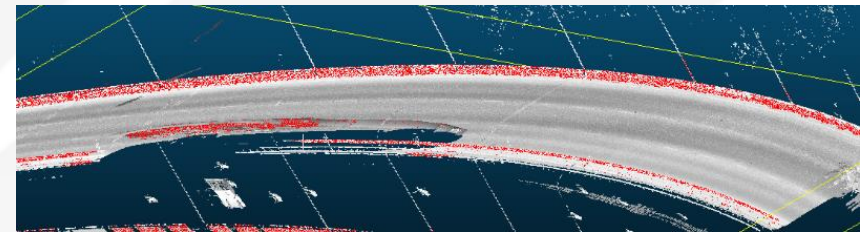


- Georeferenced data include: distance, road images, road alignment, speed limits signs, etc
- Intelligent recognitions of road markings

# Road Survey with LiDAR Stereotype – High precision model



- Collecting data on the operating roads in average speed.
- Intelligent recognition Safety Barrier/Pole/Road Marking
- Measure the Height of Barrier and the Radius of Pole

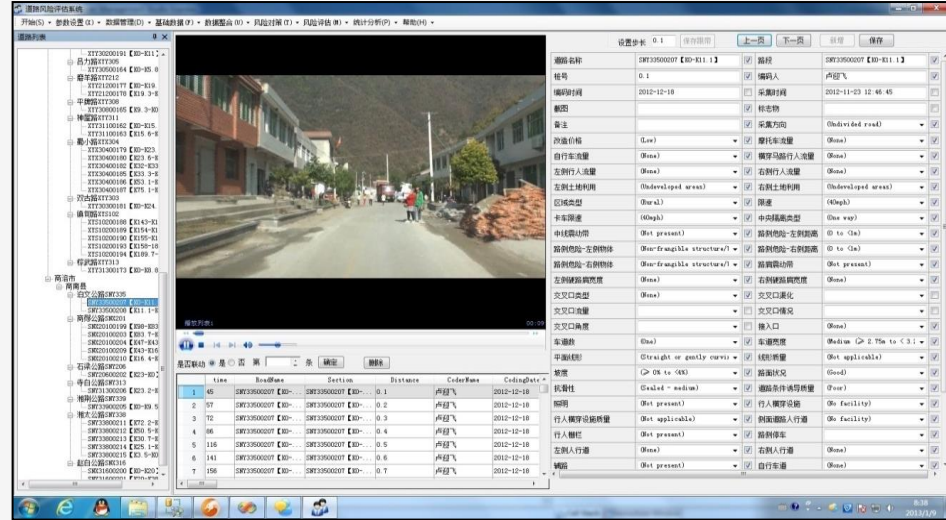


# Data Management System

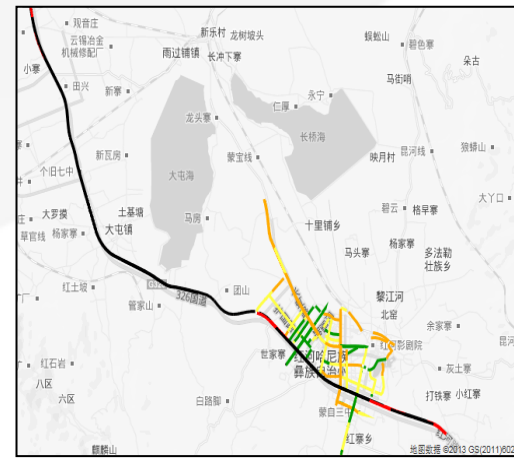
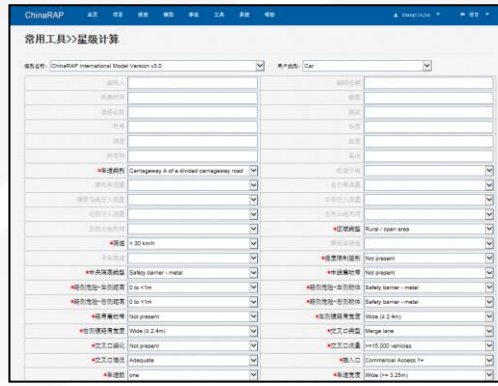
## Survey System Interface



## Road Asset Management System



## Road Risk Assessment System







交通运输部公路科学研究院  
RESEARCH INSTITUTE OF HIGHWAY MINISTRY OF TRANSPORT



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GLOBAL  
ROAD SAFETY  
PARTNERSHIP



Good roads for national development



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**Now and future:**

**Update equipment and data management systems**

**Develop ChinaRAP methodology and assessment standards and specifications**

**AI facilitated auto recognition of road attributes**

**Risk forecasting through metadata and machine learning**

**Build up the road risk monitor platform**

G40  
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瑶海区

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# THANKS!

