Khon Kaen, Thailand
Smarter Cities Challenge executive summary

Introduction
Khon Kaen, Thailand, was one of 31 cities selected to receive a Smarter Cities Challenge® grant in 2013 as part of IBM's citizenship efforts to build a Smarter Planet®. During three weeks in November 2013, a team of five IBM experts worked to deliver recommendations for the City around smarter traffic and smarter analytics, two focus areas identified by Somsak Suwansujarit, Governor of Khon Kaen Province, and his designated Smarter Cities Challenge Working Team.

The IBM Smarter Cities Challenge team worked with various government agencies and stakeholders from the private and academic sectors to understand the issues and challenges, assess available options and develop recommendations and a strategic roadmap.

The challenges
Smarter traffic
- Increase traffic management efficiency and effectiveness by automating traffic light control and developing a Traffic Smart Dashboard
- Improve the public Bus Rapid Transit system and integrate it into the Khon Kaen provincial public transportation system

Smarter analytics
- Develop an Analytics Research Center (ARC) that promotes studies in analytics and provides consultancy services to government agencies and private business
- Lead data analytics curriculum development for BSc, MSc and PhD students, focusing on current and future industry requirements
- Promote knowledge management in data analytics to build collaboration with local and international educational institutions, government agencies and private business

The global IBM interdisciplinary team brought expertise across a diverse set of disciplines, which helped it to think about the challenges in new ways and complement the high-quality planning already performed by public, private and academic bodies in Khon Kaen.

Highlights:
Smarter traffic
- Develop a Traffic Smart Dashboard
- Improve the public Bus Rapid Transit system

Smarter analytics
- Develop an Analytics Research Center
- Introduce data analytics curricula to student programs
- Build collaboration among educational institutions, government agencies and private business
Findings and recommendations

Smarter traffic
There are a number of social, political and economic factors combining to offer great opportunities to the Province and City of Khon Kaen as it grows and positions itself to be the center of development in Thailand’s northeastern region.

The drivers of change contribute to many of the challenges Khon Kaen faces in the areas of traffic management and integrated transport. These challenges are in the following areas:
- Policies and practices
- Congestion
- Infrastructure
- Compliance
- Casualties

The team made recommendations in the following areas:
- Governance
- Transport network optimization
- Integrated transport services

Smarter analytics
The team determined that advancing the Khon Kaen University (KKU) analytics capability in order to form an ARC and become a “center of excellence” for analytics would require the following:
- The development of a high-performance computing (HPC) grid through the use of a scavenger grid of university computer resources and/or investment in additional HPC systems
- The establishment of an analytics platform to support analytics research
- The development and demonstration of analytics expertise through a pilot program on available geoinformatics data, followed by additional research projects on data available within the university

Conclusion

Smarter traffic
The Province and City of Khon Kaen is well placed to take advantage of its geographic location, local businesses and academic skills, as well as the drive of the local leaders to take the area forward economically. But for this to happen, local challenges related to traffic and transportation need to be addressed to ensure continued growth, local productivity and improvements in public safety.

Smarter analytics
KKU has a strong base of resources and a vision for forming an ARC that will become a center of excellence for analytics training and research. Through the development of an HPC infrastructure and analytics platform, followed by several analytics research projects, the KKU ARC will be able to expand its collaboration with government, universities and industry and grow to become a solutions center for analytics.

For more information
To learn more, send an email to ccca@us.ibm.com or visit smartercitieschallenge.org