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**Insights into Leading Technological
Innovations for Urban Transportation
Challenges in Greener Cities**

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**Insights into leading technological
innovations for urban transportation
challenges in greener cities**



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THE SPOT - THE BUSINESS OF THE FUTURE



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Storyboard

Increase in urban transportation

Inter-connectedness – city-city travelers (half a million people in airplanes at any one time)

Upstream and downstream impact to and from airports, hotel accommodation, and supports a transportation service providing industry in its own right (taxis, public transport and feeder aircraft services)

1. How will we cope with increased pressure on urban infrastructure with the increase in population and transport needs, whilst infrastructure costs are rising and public sector budgets are being closely scrutinized
2. How do we cope when things don't go according to plan?



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Storyboard (continued)

Vehicle2X communication

1. Smarter choices for urban transportation
2. Coordinated decision making to cope with disruptive events
3. Volume of data gathered can pose great challenges in analyzing, understanding and turning this information into actionable intelligence

Sustainability angle

1. Optimised journey times
2. Optimised journey modes
3. Fuel consumption and carbon emissions
4. Emergency situations – unplanned, uncoordinated activities, such as empty planes flying to destinations to repatriate stranded travelers, etc. increase carbon emissions



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Innovation brings tomorrow's solutions to the heart of urban living

- People are at the heart of urban transportation



- A wealth of data is available to understand our urban living

- Cities are interconnected through urban transportation

- Technology innovations now enable more informed choices



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Smarter traffic choices Vehicle2X Communication



Cooperative Intelligent Transportation Systems: Driven by Vehicle-to-X Communication



Vehicle-to-Infrastructure

- Local data exchange with road side beacons and traffic signs
- Communications with traffic control and management centres
- Traffic Management: Safety and efficiency

Vehicle-to-Vehicle

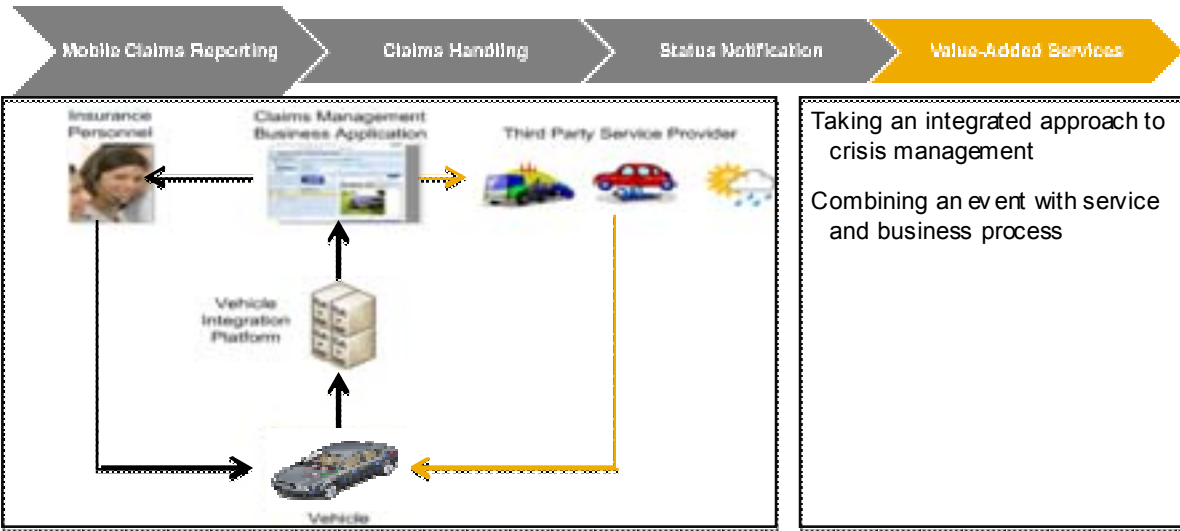
- Collision warning
- Crossing assistance
- Local danger warning
- Real-time traffic jam warning

Vehicle-to-Business

- Business telematic services
- OEM: Vehicle Relationship Management (VRM)
- Fleet: Management and coordination for logistics, car rental
- Insurance: First Notice of Loss, Pay-as-you-Drive



An example: Mobile - First Notice of Loss



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Smarter traffic choices
Traffic Information Applications



e.g. AUS Traffic

Avoiding Traffic Jams with Twitter™ and SAP Text Analytics

What is AUS Traffic?

An SAP Research prototype, for iPhone devices, that uses SAP Text Analytics technology Provides commuters with a live feed of traffic information and displays where obstacles are on a map

Uses information from hundreds of users through the Twitter platform

Avoid traffic jams

Pins on the map mark where traffic obstacles are

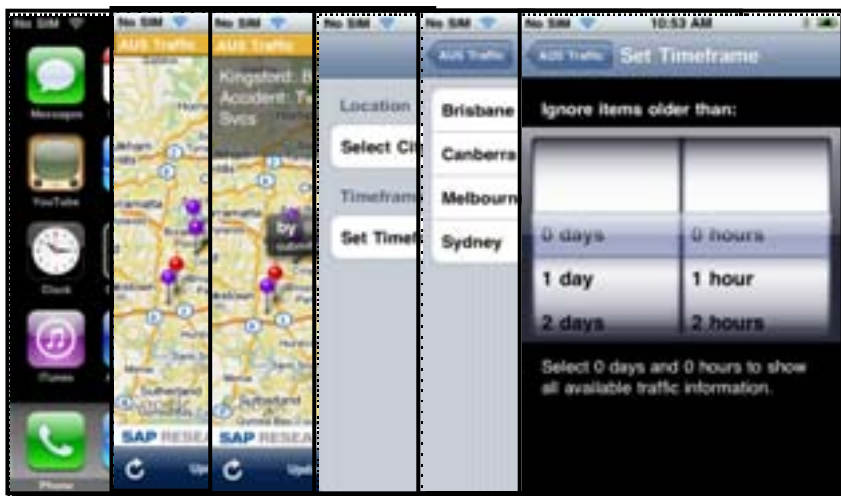
Potential obstacles are tweeted by users in the community (e.g. local traffic authorities, radio stations, and alert drivers)

The app. is currently available for Brisbane, Sydney, Melbourne, Perth, and Adelaide



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AUS Traffic – personal configuration



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Coordinated Response to Disruptive Events



OUR WORLD RUNS **SAFER**: Aware, Prepared, Responsive, Resilient Safeguarding Governments, Business & Citizen's In Times' Of Crisis

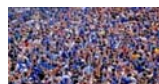
Example: The Icelandic Volcanic eruption



200,000 Stranded



\$ Billions Lost



Millions Affected

A World Full Of Risks & Threats



Greater Risks & Threats To
Citizens & Business

Governments & Businesses Must Do Better

- Early Warning & Analysis: **Situational Awareness**
- Ready To Respond: **Greater Preparedness**
- Immediate Mobilization: **Coordinated Response**
- Rapid Recovery: **Managing Business Continuity**

Crisis: Brought Its Own Challenges

- **Real Time** Information Picture
- Ability To **Plan For & Mobilize Response**
- **Identify, Track & Resolve** Staff Cases/ Priorities
- **Instant Communication & Information Sharing**



Aware, Prepared, Responsive, Resilient Integrating weather and ash cloud situational data



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Aware, Prepared, Responsive, Resilient Airport specific Twitter-fed integration



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Aware, Prepared, Responsive, Resilient Rapid access to airport websites for flight data



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Aware, Prepared, Responsive, Resilient Frequent traffic situation updates



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Sustainability



What is Real, Real-Time Computing



YouTube HD

Real, real-time computing is possible because of in-memory computing

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New technological innovations such as 'Applications In-Memory' support real time analytical processing of large data volumes



Empowering commuters, governments and organizations to...



...plan smarter



...react rapidly



...perform better

10,000 fold performance improvement versus disc servers

Saving money and time

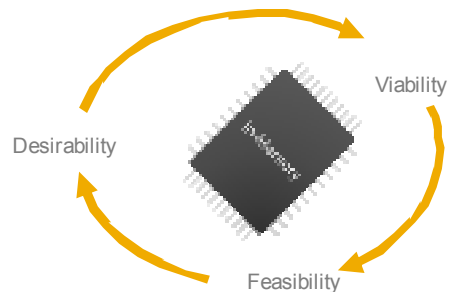
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In-Memory Computing Next Wave of Technology Innovation



Exponential potential for change

- Ground-breaking innovation
 - 10,000x improvement in speed of access from disc to memory
- Movement to main memory from disk storage: viable performance with increasing data volumes
 - Affordable servers >1 TB system memory
 - CPUs - multi-core for rapid parallel processing
 - Data more easily shared between systems, structured/unstructured
- Cost feasible technology: mass adoption
 - Business user access to rapid data processing



In-Memory Computing: Speed, Volume, Flexibility, Reach

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Summary

Technological enhancements in software tools such as analytics and in-memory computing along with hardware innovations to support affordable device to device communications are leading to new ways of:

- Driving behaviour to improve urban living
- Giving better choices in the hands of the consumer to support a more sustainable future for our grandchildren



Thank You!



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