

EcoMobility World Congress 2017

2 – 4 OCTOBER 2017 | KAOHSIUNG

Within the 3rd EcoMobility World Festival 1 – 31 October 2017

E1 Intelligent Transport System (ITS):
Using technology to make mobility accessible and safe



Intelligent

How ITS could help multimodal trip planning

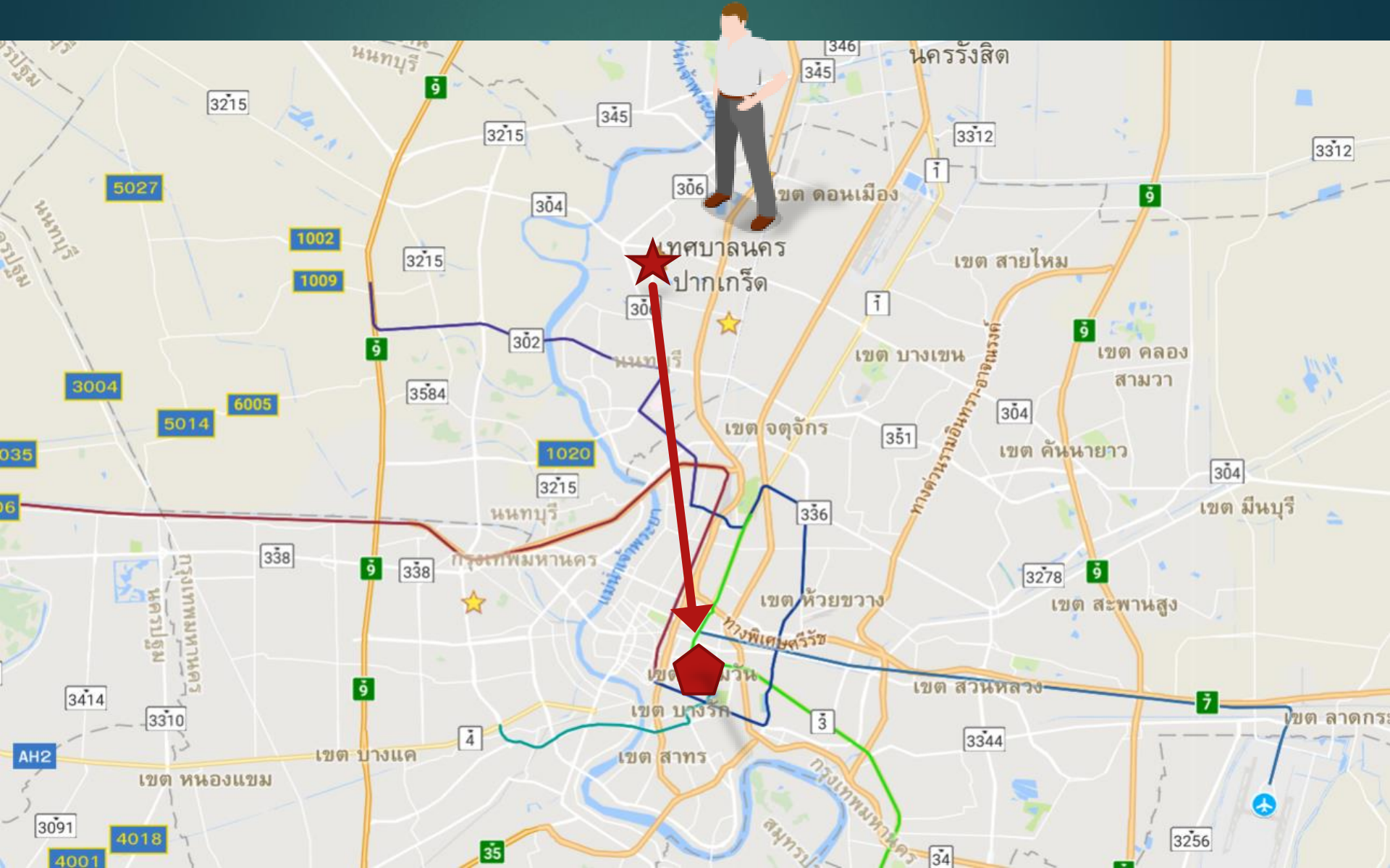
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CHULALONGKORN UNIVERSITY

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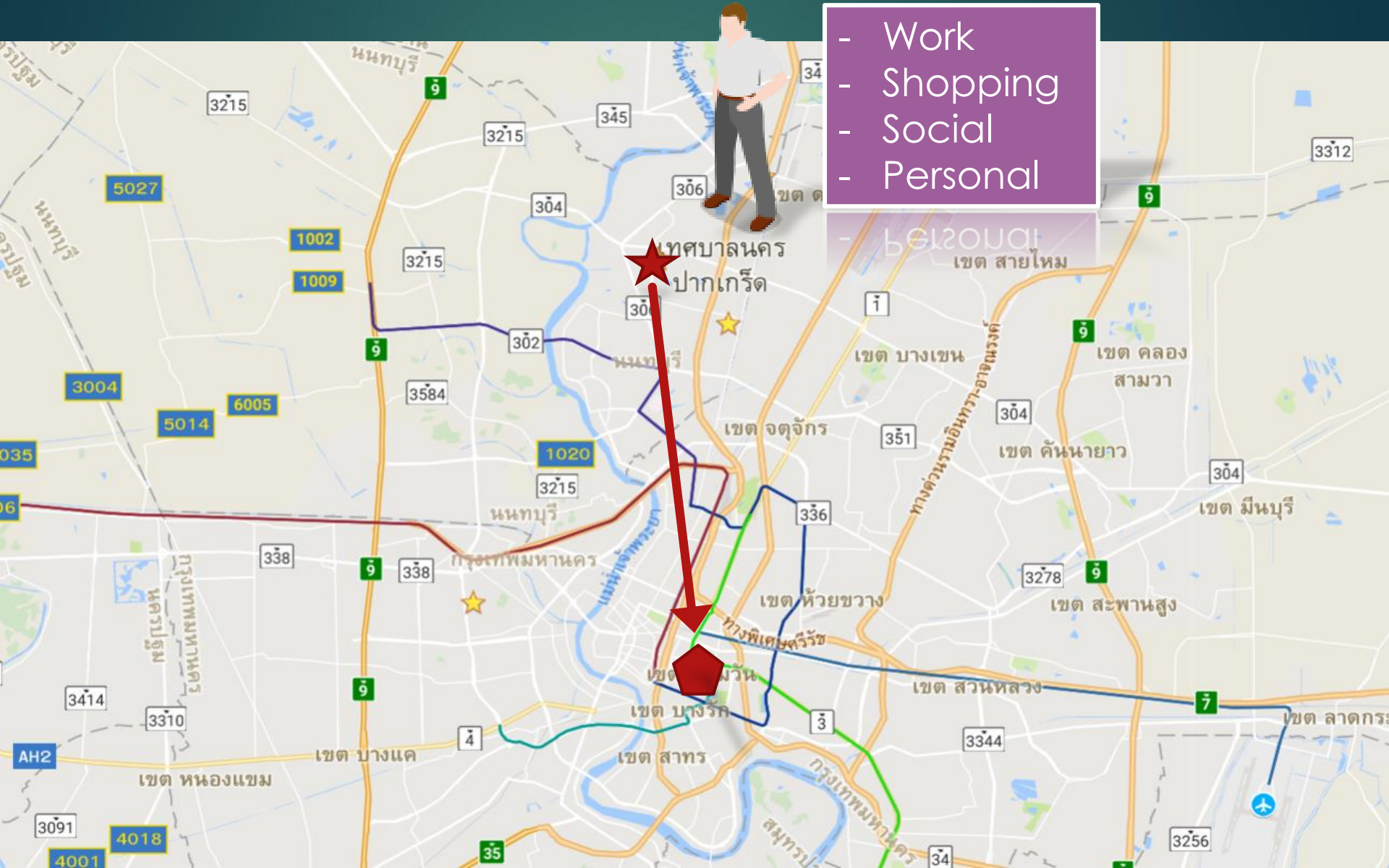


In our daily life, we travel



One way to reduce traffic congestion : people travel less or travel smart

- Work
- Shopping
- Social
- Personal



Travel choices

“Clearly, **traveler information** is a key component of most of these choices, such as periodic updates of available services, coordination between employers and employees who wish to use some of the options, providing real-time information about travel conditions, or providing custom information to specific employees in response to individual travel needs. Information dissemination can be as simple as newsletters and bulletin boards to advanced technology such as broadband wireless communications that deliver images as well as audio and text information to vehicles.”

Our "travel choices"

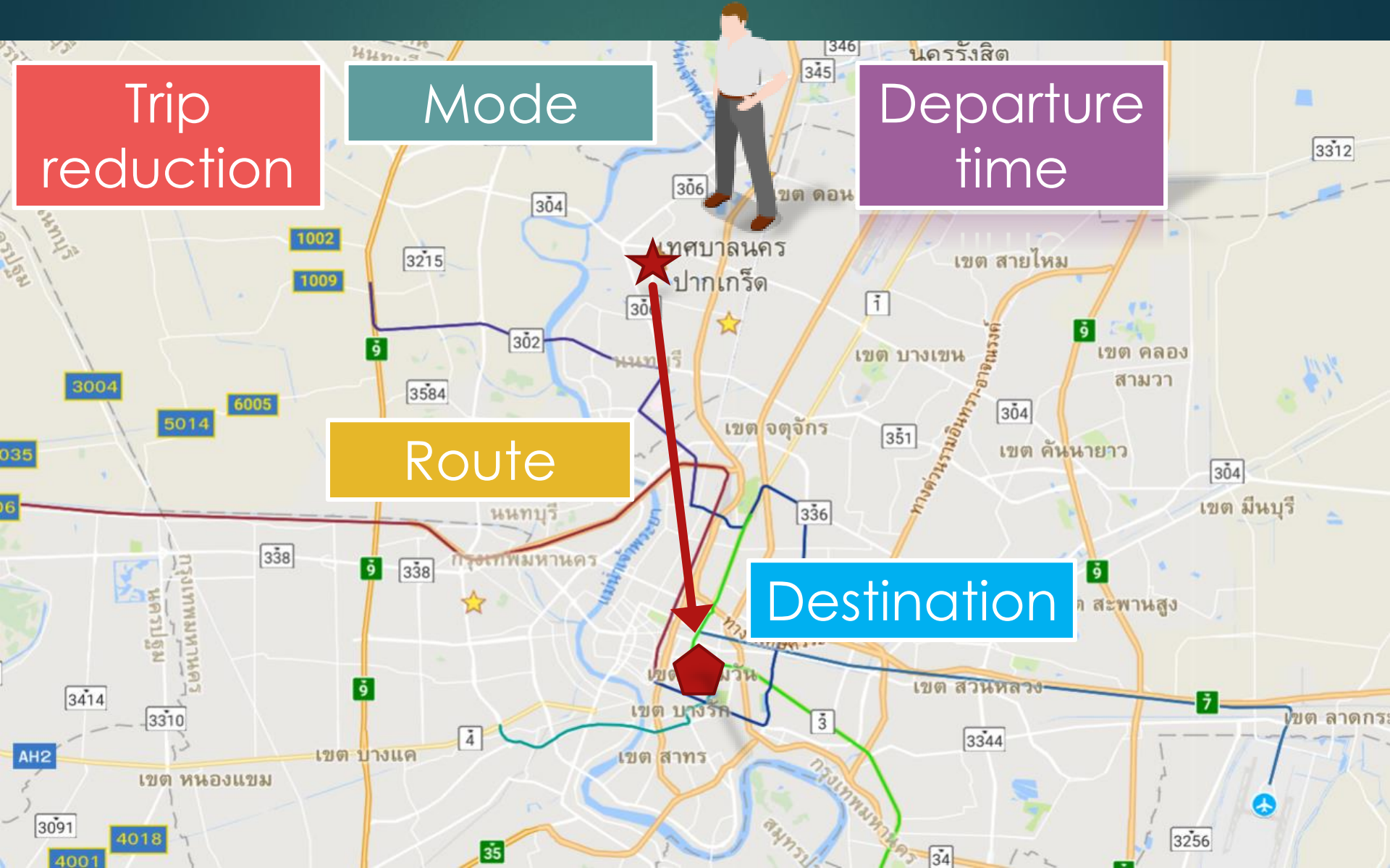
Trip reduction

Mode

Departure time

Route

Destination



What we can do with the choices

Trip reduction

Compressed workday
Telework
Online shopping

Mode

Carpool
Park-and-Ride
Taxi
Public transport
Active mobility

Departure time

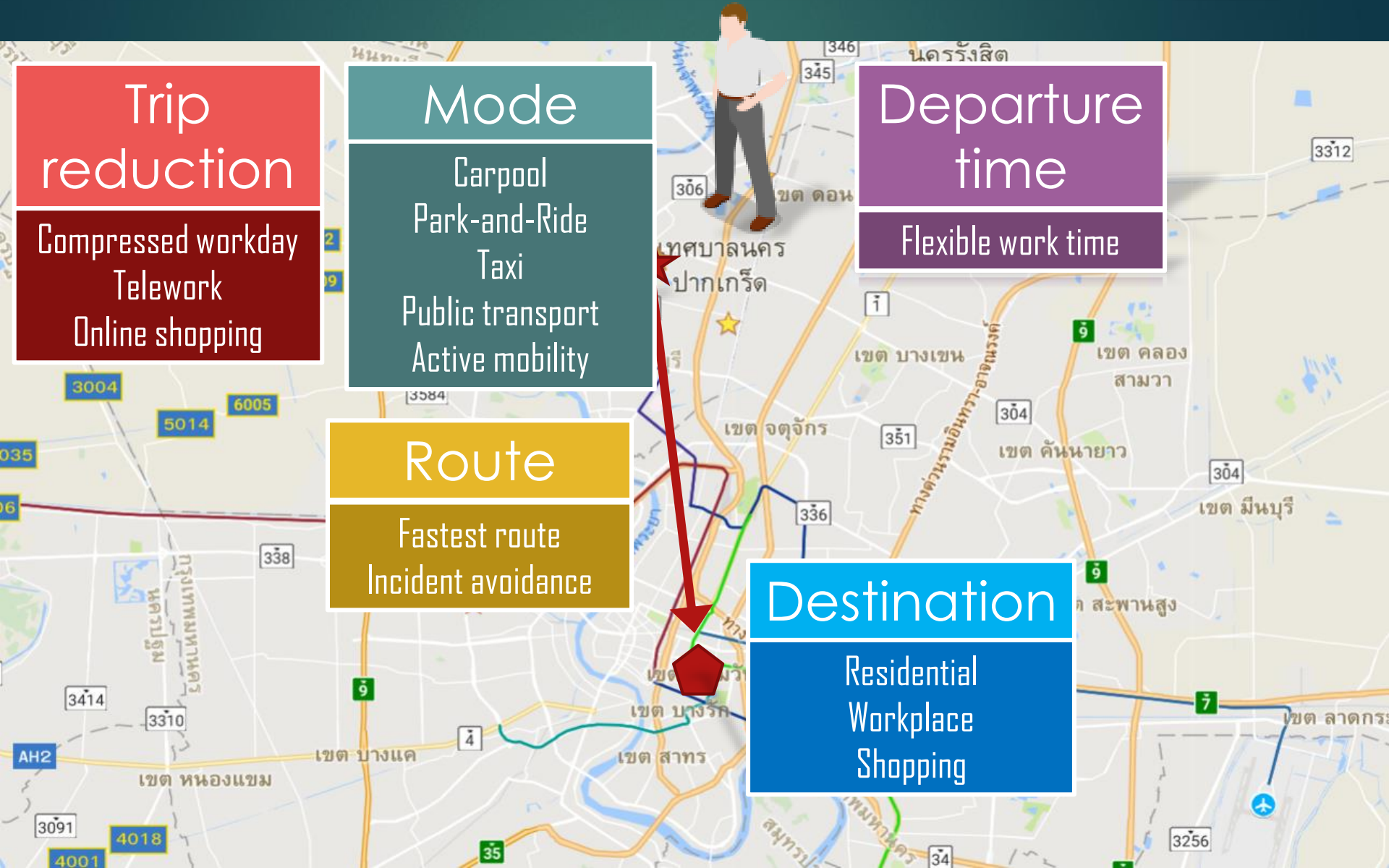
Flexible work time

Route

Fastest route
Incident avoidance

Destination

Residential
Workplace
Shopping



Multimodal trip planning = provide best information of choices

Trip
reduction

Compressed workday
Telework
Online shopping

Mode

Carpool
Park-and-Ride
Taxi
Public transport
Active mobility

Departure
time

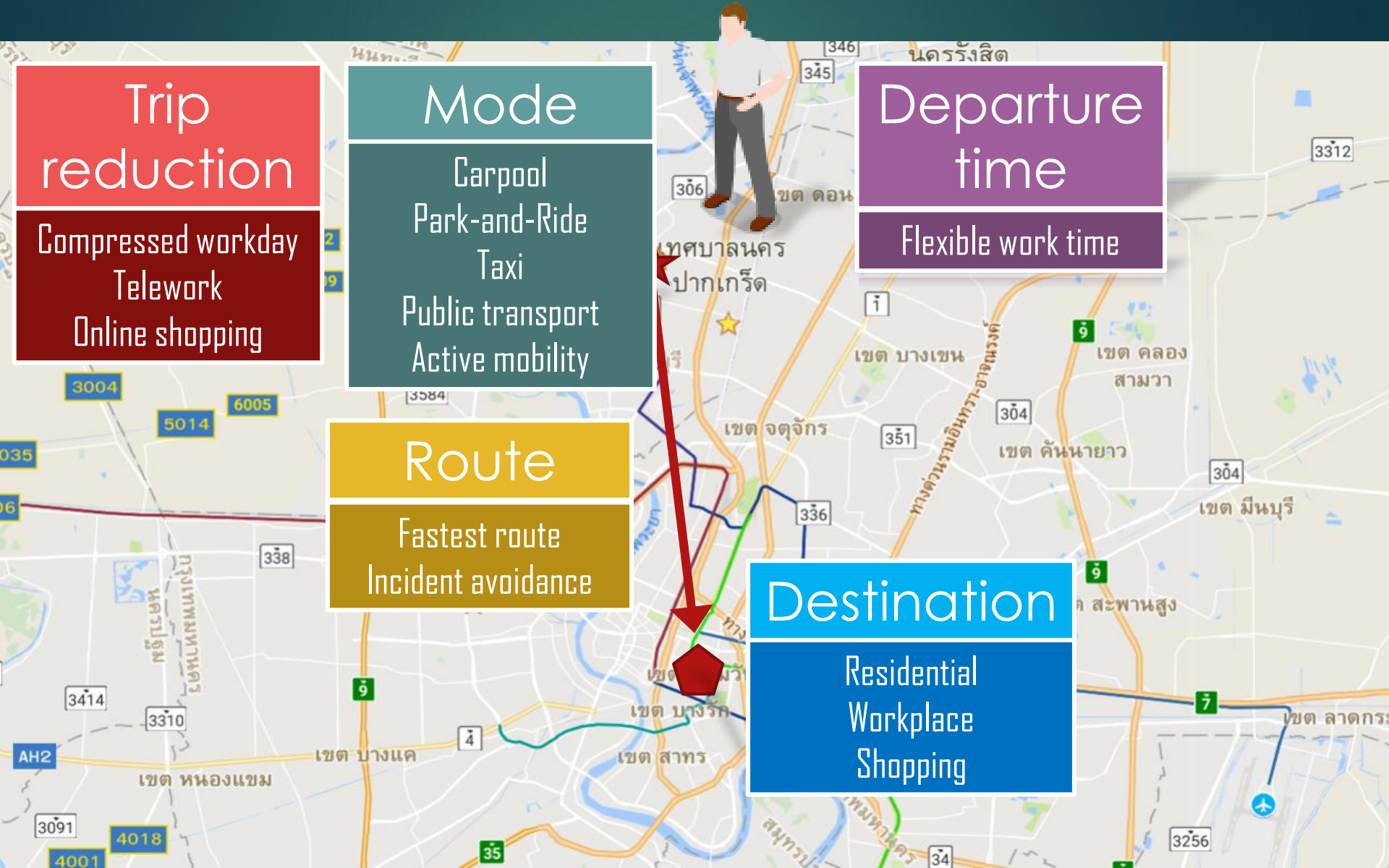
Flexible work time

Route

Fastest route
Incident avoidance

Destination

Residential
Workplace
Shopping



Multimodal trip planning

So nice if we could have this kind of suggestion...

Peter

Trip
reduction

Mode

Carpool

Departure
time

Peter, Store A does not have stuff you want. Do not go there
Peter, your boss allows you to work at home today
Peter, we switch to teleconference, you don't need to come to office

Route

Fastest route
Incident avoidance

Destination

Peter, the stuff you need is available at Store B
Peter, we show you locations of temples that you can go
Here is all information you need when you want to buy a house or office

Multimodal trip planning

So nice if we could have this kind of suggestion...

Peter

Trip
reduction

Mode

Carpool

Departure
time

Peter, Store A does not have stuff you want. Do not go there
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Route

Fastest route
Incident avoidance

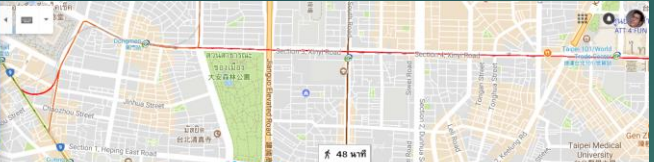
Destination

Peter, the stuff you need is available at Store B
Peter, we show you locations of temples that you can go
Here is all information you need when you want to buy a house or office

Mode

Trip planner

和乎東路二段	48 นาที
和乎東路二段	47 นาที
和乎東路一段 和乎東路二段	11 นาที
台 91號	11 นาที
和乎東路二段	12 นาที



Route
(real-time)

Departure
time

Multi-
Mode
(P&R)



smart choice



Time = z min

By car

Reduce travel
time and cost

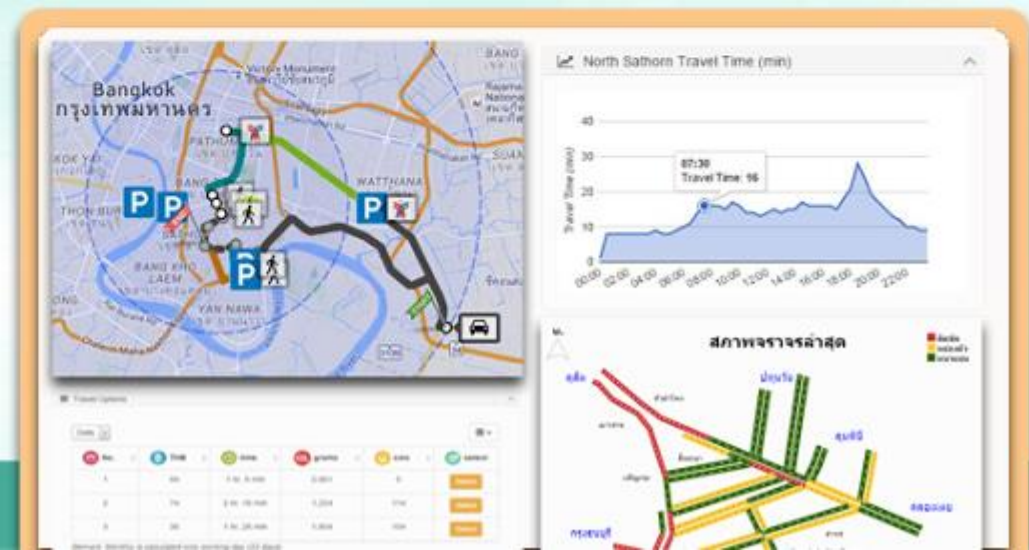
Suggest multi
modal
transport

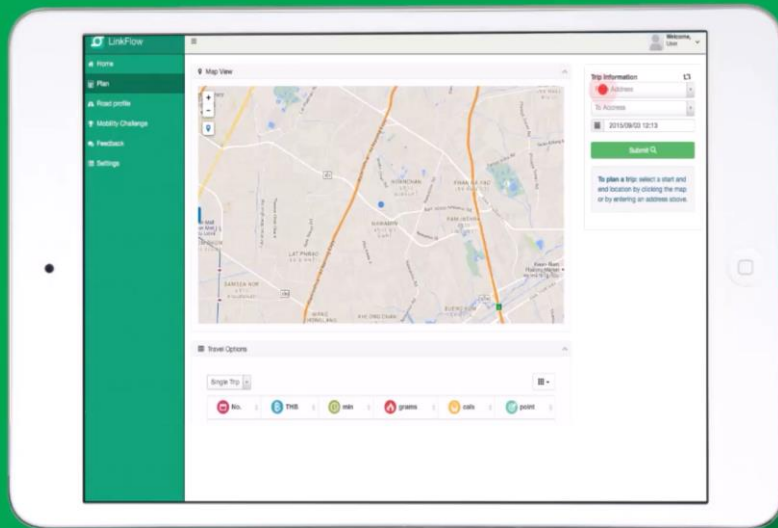
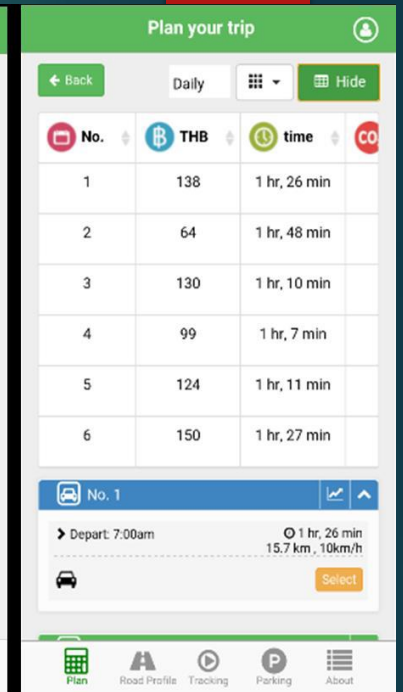
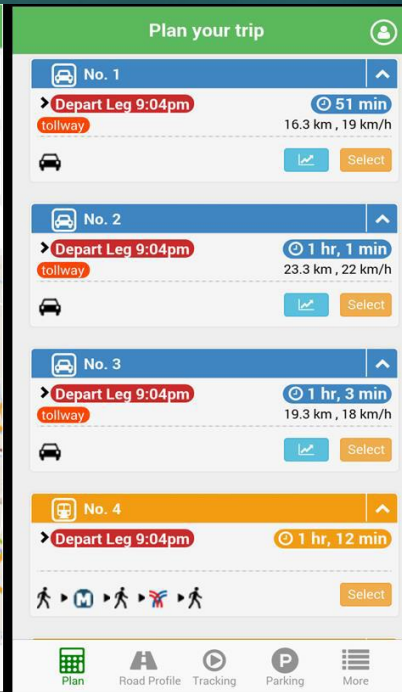
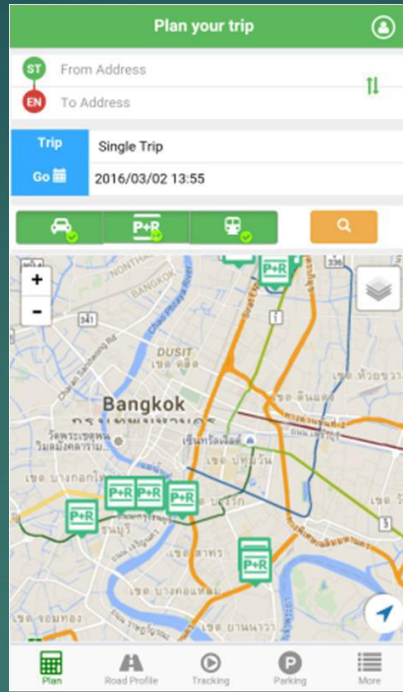


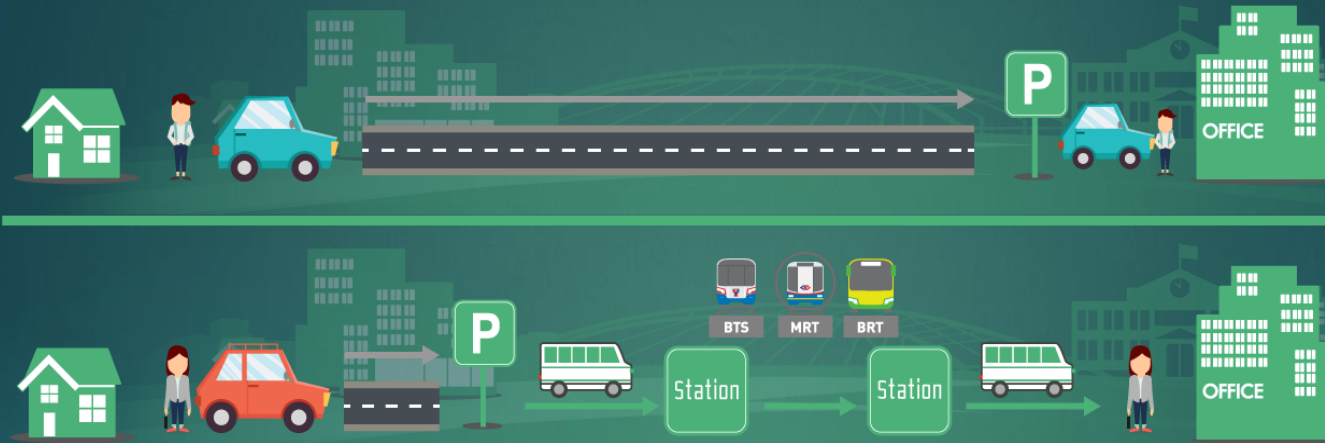


LinkFlow

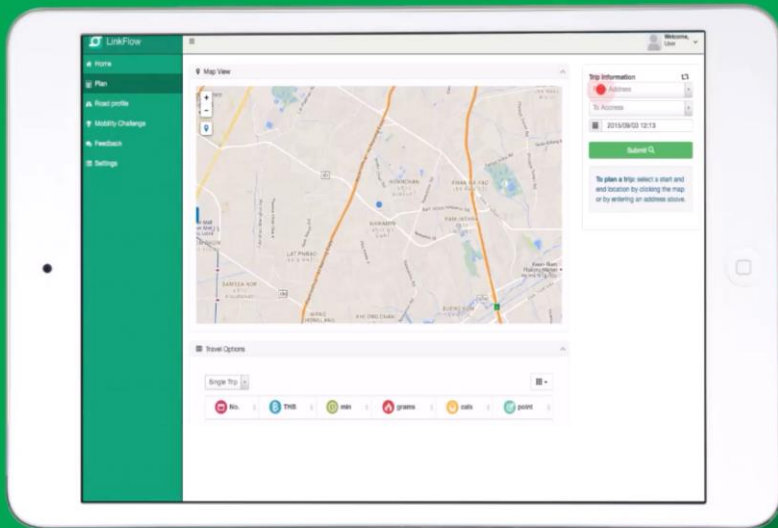
Link your flow with smart choice







Travel and cost
&
Time comparison



This collage highlights key features of the LinkFlow application:
 - **Departure time:** A purple box with the text 'Departure time' and the LinkFlow logo.

Route (real-time): A yellow box with the text 'Route (real-time)' and a map showing a route.

Multi-Mode (P&R): A blue box with the text 'Multi-Mode (P&R)' and a map showing a route involving parking and public transport.

smart choice: A white box with the text 'smart choice' and a line graph showing travel time fluctuations.

Multi-Mode (P&R)

Offer users diverse transport options from home to office.

The user is able to compare the total cost, route, travel time for each mode of travel and decide which trip is best for them

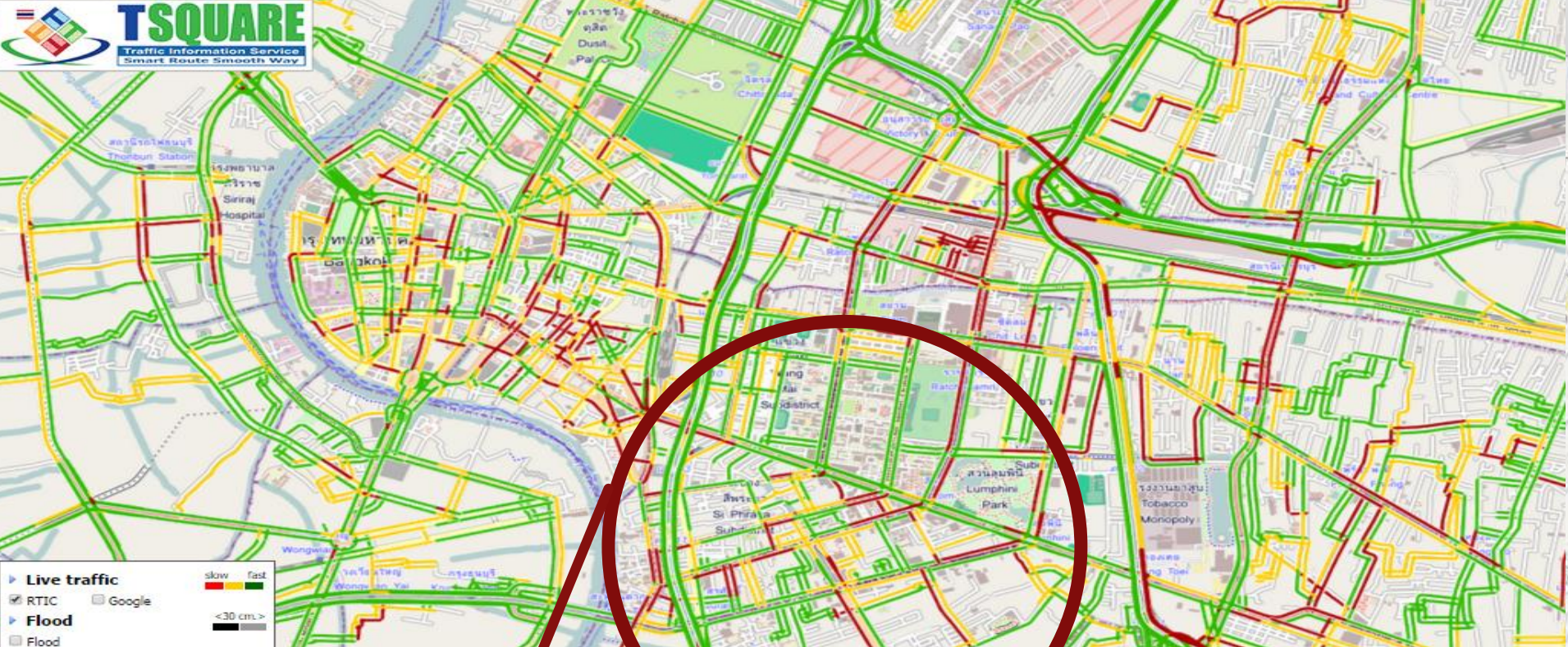


Comprehensive Door-to-Door trip planner to provide real-time transport suggestions



► Future improvement (concept)

This visualization shows a smartphone displaying the 'link flow' app interface. The app features a green circular logo and the text 'Li'. A purple box indicates 'Departure time', a yellow box indicates 'Route (real-time)', and a teal box indicates 'Multi-Mode (P&R)'. The background includes a map and a line graph showing travel time trends.



Live traffic

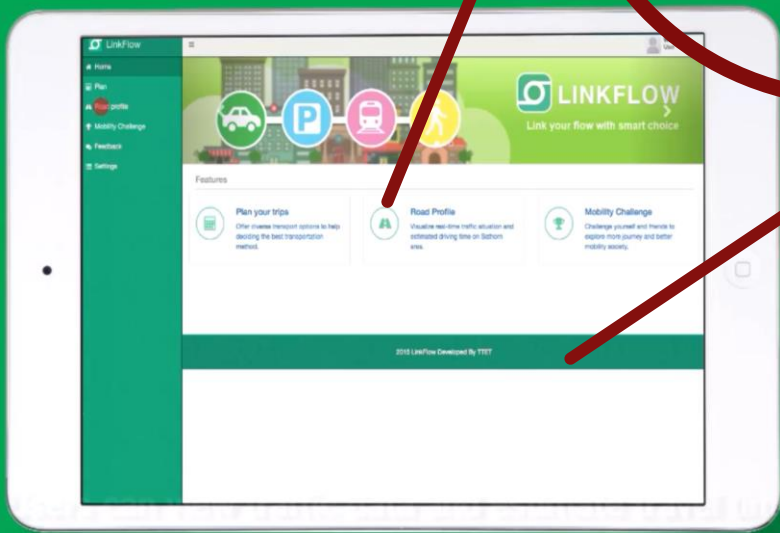
slow fast

RTIC Google

Flood

Flood

<30 cm.>

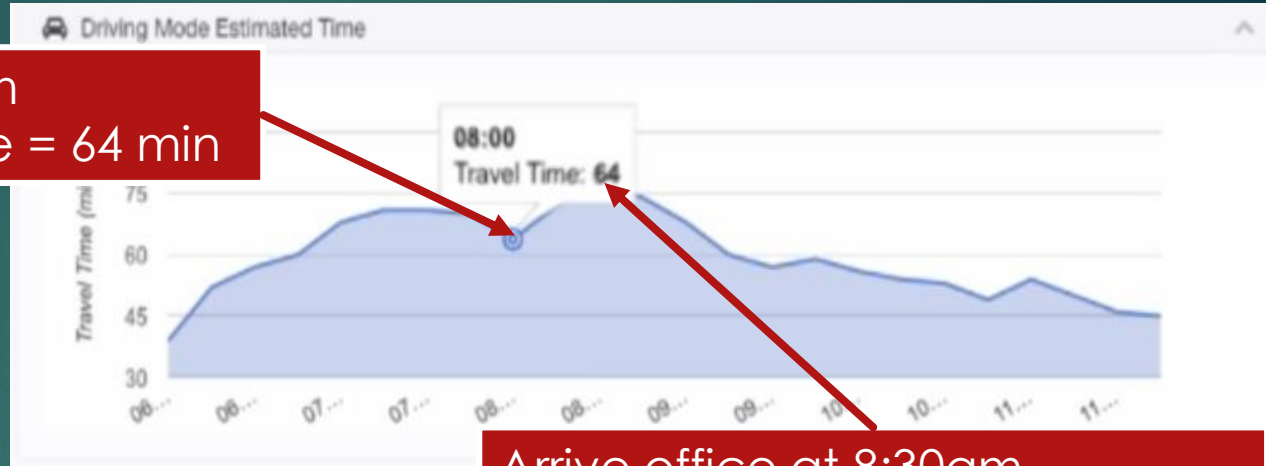

Departure time

Route (real-time)

Multi-Mode (P&R)

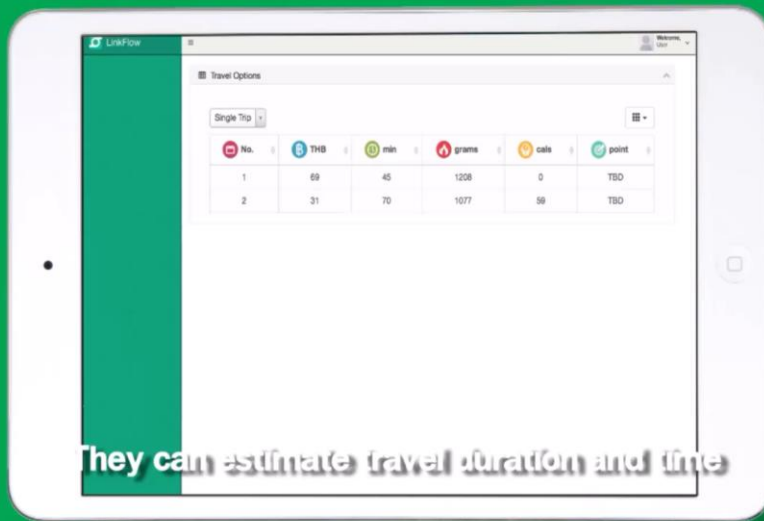
Link your flow with smart choice

Arrive office at 8:00am
 Travel time from home = 64 min



Arrive office at 8:30am
 Travel time from home = 75 min

สามารถประมาณ



They can estimate travel duration and time

link flow

Departure time

Route (real-time)

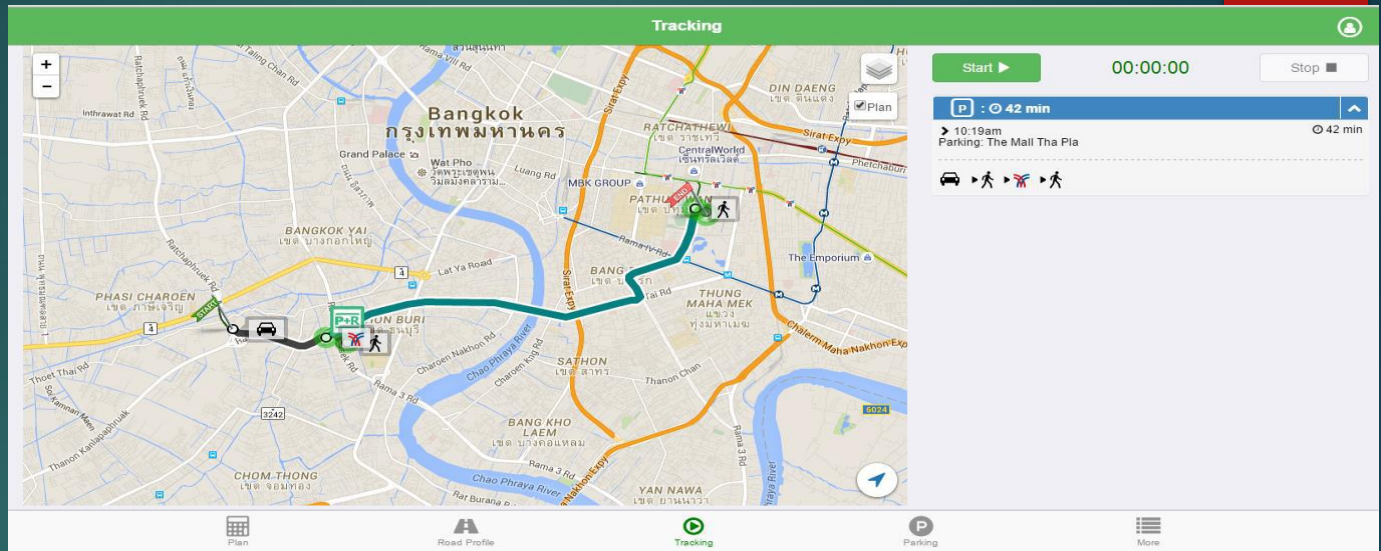
Multi-Mode (P&R)

smart choice

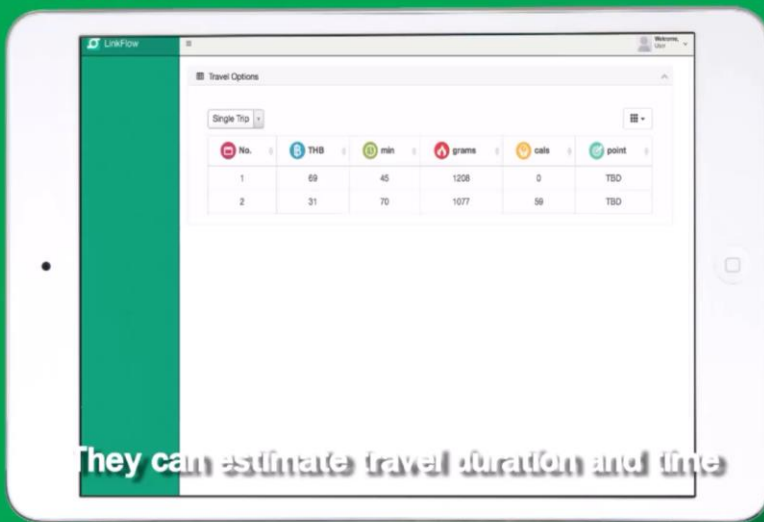
with Sabhorn Travel Time (min)

Special Application

Assist company flex-time decision



Collection of travel data

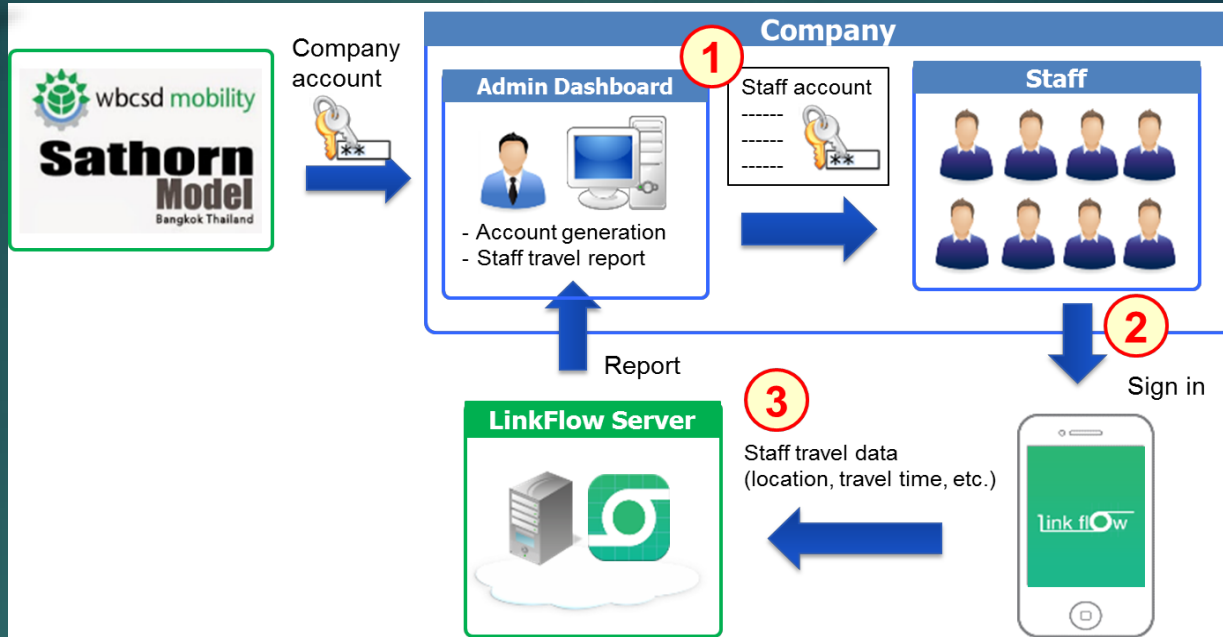


They can estimate travel duration and time

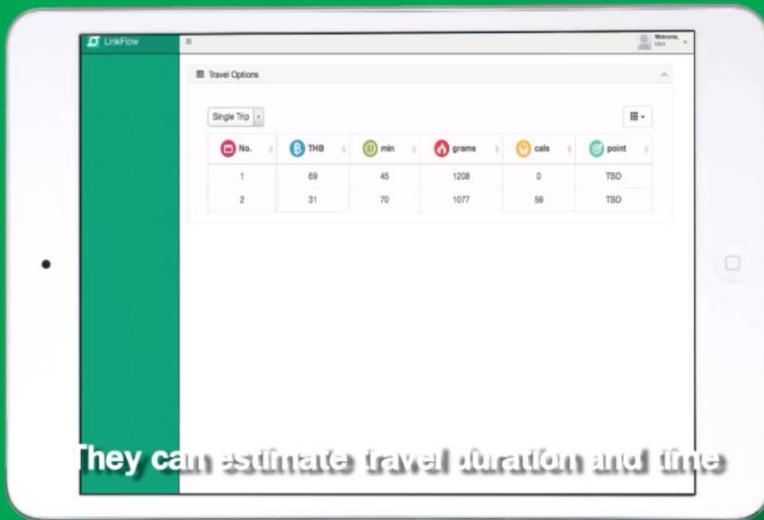


Special Application

Assist company flex-time decision



Company travel program



Departure time

Route (real-time)

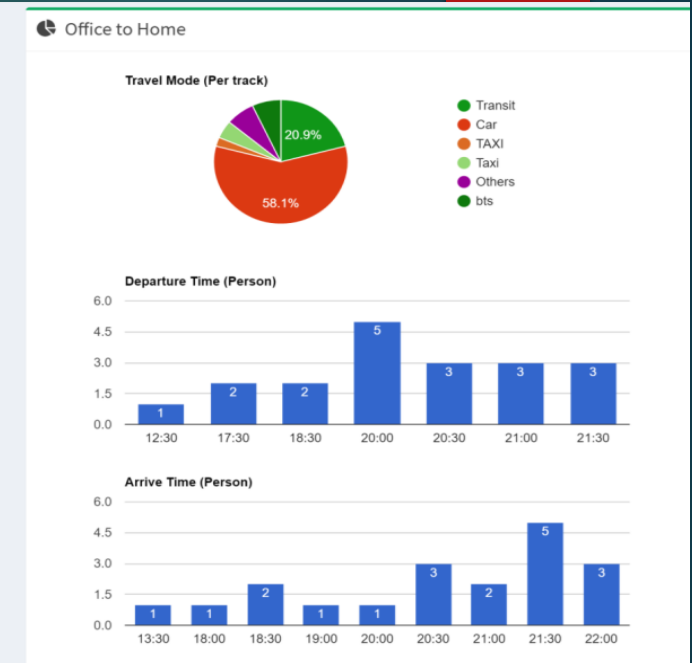
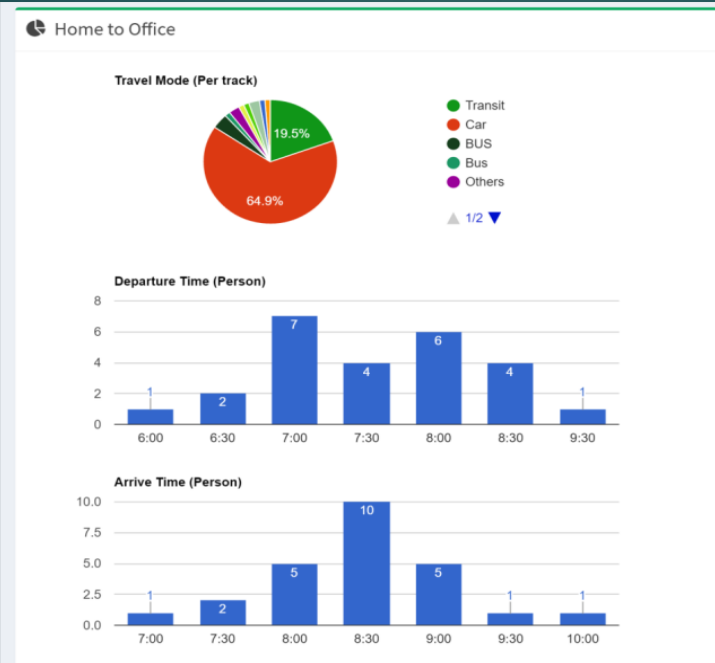
Multi-Mode (P&R)

smart choice

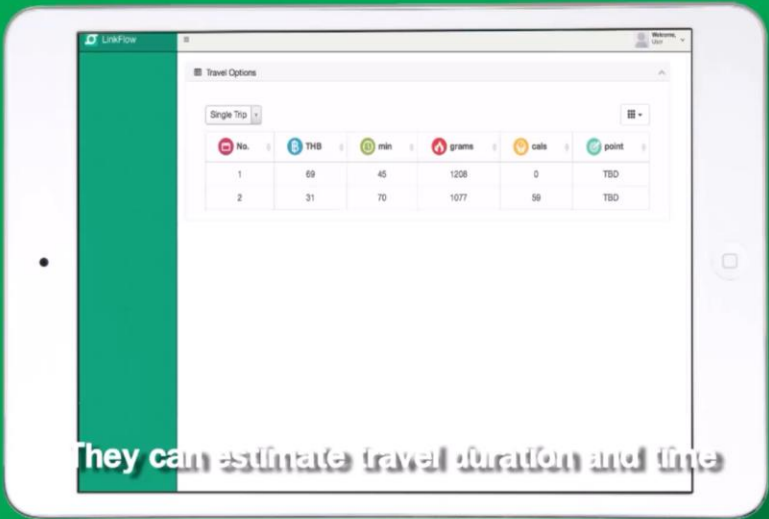
with Sathorn Travel Time (min)

Assist company flex-time decision

Special Application



Company summary report



They can estimate travel duration and time

link flow

Departure time

Route (real-time)

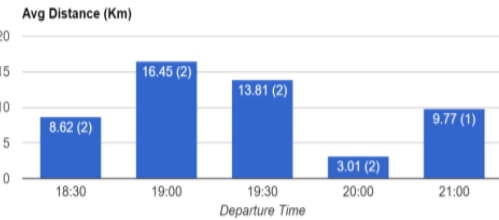
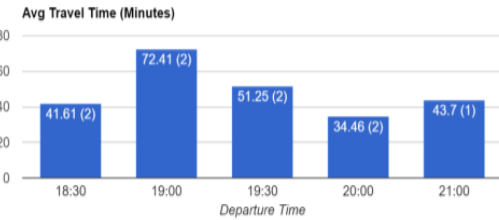
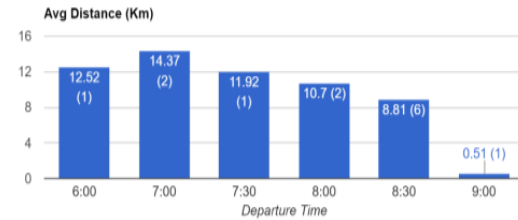
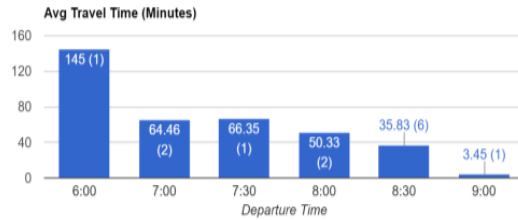
Multi-Mode (P&R)

smart choice

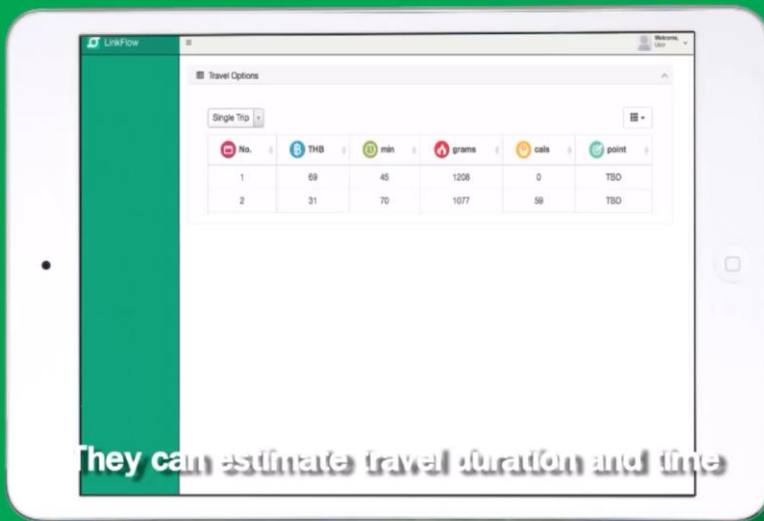
with Sathorn Travel Time (min)

Special Application

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Company summary report



They can estimate travel duration and time

Departure time

Route (real-time)

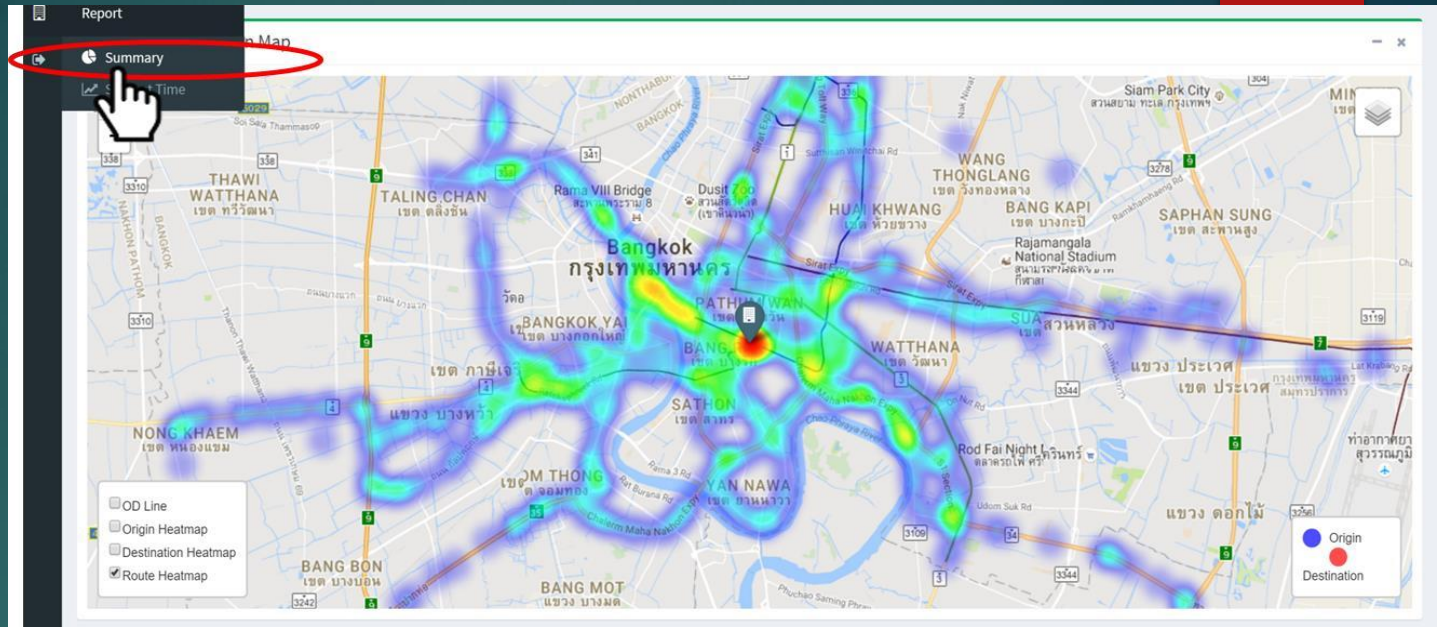
Multi-Mode (P&R)

smart choice

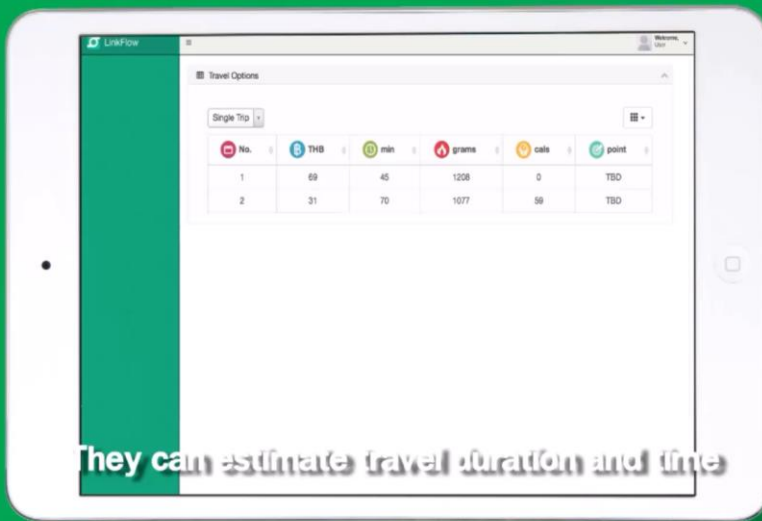
with Sathorn Travel Time (min)

Special Application

Assist company flex-time decision



Company summary report



They can estimate travel duration and time

This collage features several elements: a smartphone displaying the 'link flow' logo, a tablet showing a map with a route, and various text boxes. A purple box says 'Departure time', a yellow box says 'Route (real-time)', and a teal box says 'Multi-Mode (P&R)'. There is also a green box with the 'Li' logo and a white box with the text 'a smart choice'.



- *Multimodal trip planning* :

Provide information of choices

- Compare multi-mode of travel
- Route (via real-time information)
- Departure time

ITS is the engine of data, processing, making timely and accurate information

Link Flow as example :

Built for wider applications

- Individual travel data collection
- Company employee travel program
- Business opportunities

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Using technology to make mobility accessible and safe



Intelligent

Thank you very much

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