TIER-MODAL PROPOSAL

Foxconn Smart Cities, Smart Futures Competition - Round 2

CREATION, IMPLEMENTATION AND INTEGRATION OF A LOCAL/REGIONAL SMART TRANSPORTATION SYSTEM BASED ON SHARED TIERS OF RESOURCES

Steve Whitmoyer and Donald Heckel, Gateway Technical College

ROUND 1 – SUMMARY

In Round 1 of Foxconn's Smart Cities, Smart Futures competition we submitted a broad concept for a 'smart' transportation system based around the Foxconn campus located in the Village of Mt. Pleasant, Wl. Under this nodal smart transportation concept, Foxconn's Mt. Pleasant campus would serve as the main node. Branching off of the main node would be routes to the North, South, East and West. We call this the Tier Modal or T-Modal system.

This T-Modal system would be made up of shared tiers of resources including but not limited to: public transport such as busses and trains; private transport such as rideshare, bicycle sharing and taxis, Uber/Lyft and autonomous vehicles. All of these modes would combine to provide sustainable, affordable and potentially seamless door to door mobility options for not only Foxconn employees but residents 'from all walks of life' living and/or working in Racine, Kenosha and Milwaukee Counties and hopefully beyond.

Further, the T-Modal system components would be offered as Mobility-as-a-Service (MaaS)/Transportation-as-a-Service (Taas) options.

MaaS/TaaS

From this point on, we will refer to MaaS/TaaS as just MaaS, as they are essentially synonymous. MaaS is a relatively new transportation paradigm and describes a shift away from personally-owned modes of transportation and towards mobility solutions that are consumed as a service. This is enabled by combining transportation services from public and private transportation providers through a unified gateway that creates and manages the trip, which users can pay for with a single account. Users can pay per trip or a monthly fee for a limited distance. The key concept behind MaaS is to offer travelers mobility solutions based on their travel needs. Think of it as similar to your cellular phone account but for transport. Consumers could purchase monthly, quarterly or annual plans based on individual and family needs. MaaS is currently being used in cities around the world and is showing great promise.

Under this system, we believe that Foxconn could possibly provide the interface to the system in the form of an 'application' (app) via mobile device if they were so inclined; potentially as an additional and somewhat passive revenue stream. Foxconn could take the role of 'investor' in the system as well. They could provide MaaS for free or at a discounted rate to employees of Foxconn. Either way, this specific concept is very closely aligned with the general goals of Smart Cities, Smart Futures which include: innovative solutions to enhance all aspects of living to people from all walks of life; attract and retain talent; promote attractive streetscapes, transportation networks and living spaces, and improve sustainability. MaaS/T-Modal encompasses all of these aspects and more we believe.

T-MODAL SYSTEM

The T-Modal system would create a nodal transportation system initially in eastern Racine County. One of the primary nodes of the system would be the Foxconn Campus/Gateway SC Johnson iMET center. Radiating out from this node would be existing/proposed public transport routes supplemented with various T-Modal options. Initially, the system would be limited to a pilot program for eastern Racine County. Much of the public infrastructure and planning has already been completed as part of historical obligatory regional and local planning. The investment in the MaaS component would be the largest risk here and coordination of the components of the system would need to be undertaken in earnest. The biggest risk lies in not attempting to address the future transportation needs of this region.

As noted, the system will utilize existing infrastructure (interstates, arterials, bus stops, multi-modal centers, etc) accessed through a proposed integrated T-Modal phone app. Planning would need to take place to identify future potential autonomous 'routes.' Time is of the essence, as construction would also need to take place to accommodate said technologies.

There would be no other system like this in the region or the Midwest for that matter. It will be on the forefront of sustainability, equality and transportation among other things. Stating the obvious, the T-Modal system would be unique and thus, superior to any other since it would be the first.

FUNDING

Funding for components of the system could come from many sources, including the private and public sectors. The primary source of viability would come from the successful coordination and integration of the various existing systems in one central app combined with targeted supplemental T-Modal options. Public funds are available at the State and Federal level.

In summary, while not downplaying any costs associated with the T-Modal system we believe in the big scheme of things the costs will be relatively negligible to the integrated service that will be provided. The system and these concepts have been considered in both a social and economic context. There is money to be made for all providers in the system.

Here is a link to our T-Modal website for further information and research (Click Here)