

# 2009 Meeting of the Minds

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*“The role of the city...and the carrot-and-the-stick”*

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[www.meetingoftheminds2009.com](http://www.meetingoftheminds2009.com)

Thank you Gordon, and good morning everyone.

One of the things I find most-intriguing about “Meeting of the Minds”...is how different each has been...and how effectively each has wrapped itself around...the quickly-changing dynamics...of the global urban environment.

To say things have changed...quickly...since last year’s event in Portland...is quite an understatement.

Most of us have never seen a year...of such economic turmoil...as we did in 2008.

And hopefully we will...never again.

And yet, for all the uncertainty that remains...I believe there are many of us here today...who believe our economies ...and our cities...will emerge—somehow— stronger and smarter...and more vital than ever before.

That’s because...we are now faced with a unique opportunity...created by the onslaught of a global financial crisis...and the advent of a global energy crisis.

And smack in the middle of all of that...are this planet’s cities...the places where 180,000 human beings...are now streaming into...every single day.

We are in the midst of a textbook... creative destruction, an occurrence that creates new space...for re-thinking and re-shaping the new urbanization...for establishing partnerships between private, public and independent sectors...working together to find the missing ingredients...to make...things...happen.

On a micro-scale, “Meeting of the Minds” attempts to replicate that process... encouraging open discussion and debate...among innovators and leaders...in the private, public and independent sectors.

Toyota’s three-year partnership with Urban Age Institute in presenting this event...has coincided... deliberately...with our attempt to raise awareness...with government regulators, NGOs, consumers and the media...on the complexity of issues in play...in achieving true sustainable mobility.

For better or worse, we live in a world that is constantly seeking...simple answers... to complex problems.

In the communications business...he who has the simple answer...wins.

And the auto industry is no less at fault than others, searching for...the quick-fix...the game-changer...the leap-frog technology.

Nearly three years ago...at the first "Meeting of the Minds"...corn-based ethanol was widely considered...just such a silver bullet.

Energized by robust federal subsidies...there was popular belief...that we could simply grow our way out of...dependence on foreign oil.

Today...the solution de jour seems to be... the lithium-ion battery.

Although it shows promise for electrified propulsion...it already seems to be inflating expectations...beyond current technical realities.

At a recent conference on the future of the auto industry...San Francisco Mayor Gavin Newsom remarked that ..."...hybrids are yesterday's technology," and that it was his desire to make San Francisco...the "EV capital of the world".

During his campaign last fall, President Barack Obama announced...that he wanted to see one million plug-in hybrids...on US roads by 2015.

And just last month, Energy Secretary Steven Chu...announced that the DOE would drastically cut...hydrogen-fuel-cell-vehicle research funding...stating that the technology is too far down the road...and that the DOE needed to focus...on more short-term solutions.

Secretary Chu, who spoke at our "Meeting of the Minds" has stated that industry should...develop an affordable battery...that will power your car 300 miles without recharging. We agree with Chu's assessment that we should accelerate our efforts in advanced battery technology.

We also agree that mass marketization of fuel cell technology is a long ways away.

But that doesn't mean we should not continue to develop both.

Nor play favorites for the sake of political expediency.

In fact, it is relevant to point out that over the last five years...fuel-cell technology has progressed at a faster rate...than has advanced-battery technology.

And, that over the next five years...fuel-cell advancements and cost reductions...will again...outpace that of advanced batteries.

Toyota recently announced that the current economic crisis...will not ...affect its advanced technology R&D...and that, in fact, it plans to move assets from other areas of business...to maintain its current levels of investment.

That includes, an accelerated roll-out of...conventional hybrids across our entire line-up, hydrogen fuel cells, plug-in hybrids, pure electrics and...advanced batteries...beyond lithium ion.

But it is important to keep in mind...that the road to sustainable mobility is not one, but two...separate and distinct roads, traveling in the same direction.

One road is the path to compliance. The other is the path to market preparedness.

One road is constructed to meet the priorities of government regulators.

The other is constructed to search-out and respond to the specific needs of the consumer.

Both roads point to the same goal.

The hope is that both will arrive together in the same place.

But at times...in fact...MANY times...the rules of the road are at odds.

As manufacturers must comply with government mandates...they must also consider the market...and the needs of the consumer.

In other words, not only are automakers being told to invent the vehicles...and bring them to market...they are also tasked with creating the market.

And the latter is much tougher than the former.

The single-most important question is, will consumers purchase these new technologies in sufficient volume...to make a difference to our environment...and reduce our dependence on oil...while at the same time...sustaining the development of such technologies...that will be profitable for automakers over time?

Within that context, will consumers purchase a battery-electric vehicle...with a maximum range of 50 miles-per charge?

Will consumers invest...the time and effort it will take...to find a re-charging station for their plug-in hybrid...or a hydrogen re-fueling station for their fuel cell?

Will the electricity to power these vehicles...be wind, solar, hydro...or coal produced?

And will the escalating demand...and costs to produce clean electricity...drive prices beyond consumer's acceptance?

To find the answers...a manufacturer must travel both roads, simultaneously.

In some cases there might be detours.

In others, dead-ends.

What works in Portland, Oregon...may not work in New York City...or the Hague.

Which brings us back to the urban environment, the role of the city...and the carrot-and-the-stick.

For a new technology to succeed...in volume...in the automotive market...three criteria must be satisfied.

First...the technology must be fully developed.

**Translation:** It must meet or exceed customer expectations.

It must be flawlessly effective...useful...practical...and affordable...socially cool...and cosmetically interesting...if not attractive.

Second...there must be societal preparation.

**Translation:** Society must be both, willing-and-able to adopt or receive it.

The market will be willing ...if the technology offers greater value or benefit...than that-which it replaces.

The market will be able to adopt the technology...only if it fully understands it.

Most importantly, if the technology requires infrastructure, it must be in place...readily available...and simple to access.

The third and final criteria is perhaps the most challenging.

For sustainable mobility to succeed, government regulations and policy...must be aligned with criteria one and two...not be-out-in-front of it.

Government regulators have proven...that they can use a stick to “push” manufacturers...to develop new technology.

What they cannot guarantee, however, is that consumers will respond.

For technology to succeed in the market, it must be pulled with a carrot...not pushed with a stick.

Some examples are already in play, such as...HOV-lane stickers...congestion-pricing relief...reduced parking fees...reduced license fees...direct cash rebates and tax credits.

Federal, state, regional and city governments...must partner-up with private and independent sectors...to create new...unconventional market models...that encourage consumers to take the technological leap...and discourage them to cling to their conventional vehicles.

It is through programs like Meeting of the Minds, that Toyota hopes to show that in the end...the customer will decide...and our cities will play a vital role.

Judgment day in the marketplace is just around the corner....and Toyota will cover all the bases.

We will bring battery-electric vehicles to market in 2012...and hydrogen fuel-cell vehicles to market in 2015.

In fact, we have already begun...a program that will place...advanced fuel-cell vehicles...with private, public and independent partners...over the next three years...a large percentage, right here in New York...depending on the growth of hydrogen re-fueling infrastructure.

Finally, beginning in late December of this year, we will begin delivery of 500...next-generation Prius plug-in hybrids...powered by lithium-ion batteries.

150 of these initial vehicles will be placed with U.S. lease-fleet customers.

The program will be used for market and engineering analysis.

Participants will monitor the performance and durability...of a first-generation lithium-ion battery...while offering real-world feedback...on how future customers might respond to the plug-in process.

Future customers will have high expectations for these emerging technologies.

The program...which will include placement in New York...is a key first step in confirming...how and when we might bring large numbers of plug-in hybrids...to global markets.

It is a small first step, but no less important.

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