# **Tech Center News**

WARREN, MICHIGAN

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**OCTOBER 2, 2017** 

## **Chevy Looking Forward to Next Century of Trucks**

by Jim Stickford

GM plans to keep on truckin'. That was the message from Chevrolet Chief Executive Engineer, Global Full & Mid-Size Trucks and N.A. Vans Josh Tavel on Sept. 28.

Tavel spoke to a crowd of GM employees in the lobby of the Tech Center's VEC building as part of the company's celebration of 100 years of GM trucks.

The employees in attendance had the chance to view three GM trucks from different times in the company's history.

They were a blue 1948 Chevy, a red 1966 first generation C/K and a white 2018 Chevy Colorado 4x4

Tavel went before the crowd and gave a brief history of the GM pickup truck.

He said the company first began selling them to the public in 1918, but the first pickups were actually made in 1916. They were used to haul items at the company's plants in Flint. It took two years for GM to realize that the pickup was something that the public would also like.

There were two versions of the first pickups, Tavel said. One cost \$595 and the other cost \$1,195.

These trucks had a "whopping" 21 horsepower, Tavel said.

By 1929, the horsepower had doubled. But it wasn't until 1937, Tavel said, that trucks reached the next level. GM began selling a diversified portfolio of pickups. There were now half-tons, three quarter-tons and one-tons.

Truck manufacturing switched over from the civilian market to the military market in the early 1940s, Tavel said. They helped the U.S. win WW2 and their role in the defeat of the Axis powers is something that everyone in GM can take great pride in.

By 1947, Tavel said trucks really began to take off. They now came in six-cylinder models and the focus began to be placed more on the customer and how he or she drove trucks. They became safer and more comfortable.

"One cool thing was that defrosters were first put in trucks in 1947," Tavel said. "By 1965, we enter the fleet era, and trucks began to be used in more recreational ways. People were using them to haul trailers to their cabins up north. They became a staple of our culture.

GM sold 585,000 pickups in 1966 alone, Tavel said.

Next to speak was Eric Stanczak, chief engineer, Full Size Truck. He filled in for Tavel when Tavel's voice became horse from a slight cold.

Stanczak said that Chevy's trucks are very personal to many who work at the Tech Center. People have spent years working on and improving the trucks Chevrolet makes.

Which is why it made sense for Chevy to announce that the brand is honoring the owners who have made Chevy Trucks a part of their lives for the past century with a 100-day celebration featuring two new Special Edition trucks, the national rollout of the Truck Legends customer loyalty program and more.

"The Chevy Trucks Centennial is a huge milestone for us, and is equally important to our customers," said Sandor Piszar, Chevrolet Trucks Advertising and Marketing director in a statement

**CONTINUED ON PAGE 3** 



GM employees view historic Chevy trucks at a special centennial celebration at the VEC building.

## **MCC's M-CAM Program Helped Many Students**

#### by Jim Stickford

There is frequent talk about a skills gap making it difficult for employers to hire qualified people. At a recent meeting at Macomb Community College, a group of representatives from eight community colleges in Michigan learned how well a program designed to fill that skills gap went.

The results of the program, called Michigan Coalition for Advanced Manufacturing (M-CAM), were discussed at a meeting at the MCC campus in Warren on Sept. 27.

School president Dr. James Sawyer said M-CAM was really the brainchild of retired MCC president James Jacobs. Sawyer said that MCC was proud to be the lead for M-CAM and that the eight community colleges in Michigan that participated - Bay College, Grand Rapids Community College, Kellogg Community College, Lake Michigan College, Lansing Community College, MCC, Mott Community College and Schoolcraft College - all collaborated to make M-CAM work.

The program was funded by a U.S. Department of Labor grant of \$24.9 million.

Money went toward paying for education expenses of students in the program as well as for the schools to update their equipment, enhance coordination and build capacity across the eight schools and improve student access to career advising and better align training to meet employers' needs, said Joe Petrosky, dean of Engineering & Advanced Technology at MCC.

The three year program began in 2014 and ended this year, said Sean Patrick, manager of Media Relations at MCC.

Petrosky said that a total of 3,925 students were enrolled in M-CAM. Of that number 1,348 were from MCC. The school also received about \$9.6 million of the \$24.9 million in funding.



Thanks to M-CAM students at schools in state learned new skills.

schools were required to hire a third-party evaluator to look at the program and how the schools performed and how well they fulfilled the goal of M-CAM. The group chosen was Social Policy Research of Oakland, Calif. Two representatives - Heather Lewis-Charp and Deanna Khemani - spoke at the Sept. 25 meeting at MCC. Lewis-Charp said that in their evaluation they compared M-CAM students to regular commu-

was 34 years old and that 63 percent had no prior college experience. "Many students had multiple barriers to entering college," Lewis-Charp said. "But M-CAM is not about cold numbers, it's about helping students achieve success. The program served special populations. That included veterans,

lic in the spring of 2017. The

names of the two companies are

Delphi spokesman Zach Peter-

son said in the press announce-

ment that the two new entities

will be highly-focused, publicly-

traded companies.

Aptiv and Delphi Technologies.

nity college students. They found

that the average M-CAM student

#### **Gilbert Promises Funding for Code Learning**

DETROIT (AP) - A coalition of businesses including Amazon, Google and General Motors has agreed to give \$300 million to boost K-12 computer science programs across the U.S.

Internet Association CEO Michael Beckerman announced Sept. 26 that the private-sector contribution will come in over the next five years. Beckerman led a panel discussion at a downtown Detroit high-rise that featured President Donald Trump's daughter and adviser Ivanka Trump.

Her visit to Detroit came a day after the president announced a plan to spend at least \$200 million annually on competitive grants so schools can broaden access to computer science edu-

There were two reasons for that, Petrosky said. First, they had the most students – about a third of all enrolled. Second, as the project leader MCC was also responsible for many of the administrative costs of the project. As part of the project, the

#### **CONTINUED ON PAGE 3**

cation. "Knowing how to code is really foundational toward success in any industry, not just tech narrowly defined," Ivanka Trump

Just before Ivanka Trump arrived on stage, Beckerman announced the private-sector contribution.

said.

Amazon, Facebook, Google, Microsoft and Salesforce.org are giving \$50 million apiece; Lockheed Martin is promising \$25 million: Accenture is committing more than \$10 million; and General Motors and Pluralsight have pledged \$10 million toward the effort. Additionally, Detroitbased Ouicken Loans announced that it will work to make sure that 15,000 Detroit Public Schools students receive computer science training.

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#### View This Week's Edition at http://TechCenterNews.com

Aptiv and Delphi Technologies

After months of waiting, Del-

phi Automotive on Sept. 27 revealed the names of the compa-

nies that will result from the

nounced spin-off of its Power-

train Systems segment. The move was announced to the pub-

previously

an-

those are the names.

company's

# DELPHI

Delphi is splitting into two companies - Aptiv and Delphi Technology.





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#### Macomb County Holds Septic Tank Seminar

Macomb County MSU Extension, in partnership with the Macomb County Health Department, is holding a free Septic System and Well Use & Maintenance Workshop in Richmond Township. The workshop will cover how a septic system functions, septic system maintenance, how to detect septic system failure, water conservation and well construction and maintenance. Handouts, including the updated MSU Extension Septic System Management folder, will be provided to each participant.

A faulty septic system can threaten a family's health as wel l as harm pets and wildlife, contaminate groundwater and lower property values. Protecting and maintaining a household water system is as simple as following a few guidelines.

The workshop will be held from 6 to 8:30 p.m. on Thursday, Oct. 12 at the Richmond Township office located at 34900 School Section Road. Registration is strongly recommended.

To register, visit www.events. anr.msu.edu/septicsystemaugust 2017

For information or registration assistance, please call 586-469-6440, said Macomb County spokesperson Terry Gibb.

**Cadillac Shows Off Hands Free Tech with Long Journey** Traditionally, driving a car has been a literal hands-on experience. Cadillac is doing something to

change that. Beginning Sept. 25, Cadillac embarked on the first official hands-free drive on freeways from one side of the country to the other, using the industryleading Super Cruise technology, said Cadillac spokesman Donny Nordlicht.

A select group of key stakeholders and media will put the power of Super Cruise technology to the test in twelve Super Cruiseequipped Cadillac CT6 vehicles. which departed this morning from Cadillac House in New York Citv and will travel to Los Angeles, California, Nordlicht said.

Crossing through 16 states, plus the District of Columbia, in Super Cruise-equipped Cadillac CT6 vehicles, the drive program will make stops in major cities across the U.S. including: Cleveland; Chicago; Memphis, Tenn.; Dallas; Santa Fe, N.M. and Phoenix.

Super Cruise is Cadillac's innovative driver assistance feature, which enables hands-free, driverassisted operation on 130,000 miles of limited access, divided freeways in the U.S., Nordlicht said.

"Cadillac is setting new industry standards with ground-breaking driver assistance technologies like Super Cruise, the world's first true hands-free driving system for the freeway," said Johan de Nysschen, Cadillac president.

"We are excited to bring Super Cruise, a true testament to Cadillac's innovative spirit and technical capability, on its first-ever hands-free drive on freeways from coast to coast."

The multi-state, cross-country drive marks the first time that Super Cruise technology will be demonstrated on New York City freeways. Cadillac has been granted a New York automated vehicle testing license under a

hand with government officials to continue to develop new technologies that will define the future of transportation in the U.S.," said de Nysschen. "It's especially fitting to kick off this drive in New York City, the home of Cadillac's new global headquarters, and we're honored to have the support of New York Governor Andrew Cuomo and Lieutenant Governor Kathy Hochul, both of whom foster New York's leadership in innovation and cuttingedge technology."

To celebrate the historic drive, Cadillac hosted a press conference with Hochul at Cadillac House in New York City. The Lieutenant Governor and de Nysschen sent off the fleet of Super Cruise-equipped vehicles, led by a police escort, as they embarked on the cross-country journey.

"Revolutions in transportation were at the heart of New York's original rise to national prominence and economic prosperity, and this cross-country demonstration continues that tradition." said Hochul.

"By changing state law to allow automated vehicle testing and partnering with Cadillac to bring its headquarters to New York City, Governor Cuomo has positioned New York State to take the lead in the development of the driverless/hands-free technology that is rapidly transforming the automotive industry.'

Super Cruise will be available this fall in the 2018 Cadillac CT6. Unlike other driver assistance systems, Super Cruise utilizes two advanced technology systems - a driver attention system and precision LiDAR map data which brings a new level of technology and intuitive control to further elevate freeway driving, Nordlicht said.



Cadillac's de Nysschen and New York Lt. Gov. Kathy Hochul start cruise.

## **Diesel Scandal Continues to Plague VW**

BERLIN (AP) – Volkswagen says it expects to take charges of about 2.5 billion euros (\$2.9 billion) in the third quarter to cover the costs of buying back and retrofitting diesel cars in North America.

The German automaker said Sept. 29 that it is increasing provisions for a buyback and retrofitting program for 2-liter TDI vehicles that was part of settlements over its diesel emissions scandal. It said that the program "is proving to be far more technically complex and time consuming.

The company has been under a cloud since 2015 over its equipping of diesel cars with illegal software that enabled cheating on U.S. emissions tests. Volkswagen has agreed to more than \$20 billion in fines and civil settlements over the scandal, and it may have additional problems on the horizon in the U.S

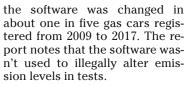
German weekly Der Spiegel reported Sept. 29 that VW could face further scrutiny because it failed to properly inform U.S. regulators about changes to emissions control software in nearly one-half million cars with gas engines

Citing an internal VW investigation, *Der Spiegel* reported that

Agent.

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Both the U.S. Environmental Protection Agency and VW's top executive in the U.S. confirmed the inquiry on Sept. 29.

VW of America CEO Hinrich Woebcken said the company is cooperating with agencies involved. Asked if the software is another "defeat device," which could thwart emissions tests, Woebcken replied: "Not of my knowledge." He declined further comment at an event in suburban Detroit to announce a new longer warranty for VW vehicles.

The EPA said it couldn't comment due to "ongoing investigation work" and said the seriousness and outcome is not known at present.

The omission could further dent VW's image. The company is to release third-quarter earnings on Oct. 27.

That wasn't the only bad new from Volkswagen last week.

The New York Times reported that the investigation into Volkswagen's diesel emissions scandal expanded significantly on Sept. 28 after German authorities



arrested a former high-ranking executive of the carmaker, two people with knowledge of the arrest said.

The executive, identified by German news outlets as Wolfgang Hatz, is a former chief of engine development at Volkswagen. He worked closely with Matthias Müller, now the company's chief executive, when both were members of the management board of the carmaker's Porsche unit. Hatz was being held in Munich without bail.

In May of 2016 Hatz, then a top vehicle development manager in Volkswagen's Porshe division, was replaced by Michael Steiner.

Hatz served both as Volkswagen's head of engine development as well as at Porsche head of development.

AP reported in May 2016 that he terminated his employment contract "on his own initiative" due to the ongoing investigation.

Porsche said at the time that Hatz had cooperated with the effort to uncover who was at fault for engine control software that deliberately disabled emissions controls.

Hatz served both as Volkswagen's head of engine development as well as at Porsche head of development.

#### MCC Comedy **Fundraiser** A Success

Comedy & Cocktails, fundraiser presented by the Macomb Community College Foundation on Sept. 15, attracted more than 300 attendees and raised in excess of \$45,000 to benefit the college's arts and cultural programming. This is the highest amount raised in the four-year history of the event. "This support is important to sustaining a diverse range of programs that not only entertain but also enrich, helping educate, building community and contributing to economic vibrancy," said Dr. James O. Sawyer IV, MCC president. "Macomb Community College is dedicated to providing meaningful arts and cultural experiences to community members of all ages and backgrounds." Presented by First State Bank, the event began with cocktails and the dedication of the Delia Rendon-Martin Lobby of the Lorenzo Cultural Center in recognition of her generous contributions to the college including an endowed scholarship for Macomb culinary students.



new law championed, enacted and advanced by Gov. Andrew Cuomo, Nordlicht said. 'We are proud to work hand-in-

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**OCTOBER 2, 2017** 

COVERS THE TECH CENTER AND THE IMMEDIATE AREA

PAGE 3



Tavel spoke of the history of pickups recently at the VEC building.

## **Chevrolet Celebrates the History of Pickup Trucks**

**CONTINUED FROM PAGE 1** 

to the media. "That's why we will be celebrating 100 years of Chevy Trucks over the course of the next 100 days. It's important that we share this celebration with our loyal customers who have helped us achieve this accomplishment."

Chevrolet kicked off the Centennial Celebration Sept. 28 at the State Fair of Texas, where the brand announced four ways customers can celebrate the Chevy Truck Centennial:

- New 2018 Silverado and Colorado Centennial Special Editions;
- National rollout of the Chevy Truck Legends program;
- Branded merchandise fea-Chevy heritage turing howtie:

 Chevy Trucks Centennial Celebration on Dec. 16, 2017. The latest additions to the

will continue to grow and connect customers from all corners of the nation through their shared love for Chevy Trucks.

Stanczak said none of the great trucks GM has made over the years was possible without the efforts of the people who worked at GM for a century.

"You guys make this happen," Stanczak said. "You should feel proud. And you should forward to the next 100 years. Be proud of our products and the work you've done to make these great trucks."

Tavel then concluded the ceremony by saying that trucks are important to GM's future.

"It's been an awesome 100 years," Tavel said. "And what we are doing right now with the next generation trucks is awesome too.

## MCC Program Helping Fill Skills Shortage

#### CONTINUED FROM PAGE 1

who were the only population required by the feds. There were also groups served such as older workers, women, justice-involved individuals and English learners."

Overall, Lewis-Charp said, 6 percent of students (251) were veterans, which matches the Michigan population. About 31 percent (1,218) were older workers. They were a hard-to-serve population because they often didn't have a lot of time for training programs.

Another 13 percent of students were women. Justice-involved students were about 10 percent (190) of the program. Justice-involved was defined as people involved in the justice system in some way. It could have meant they were ex-cons, or had an arrest record.

The majority of the students, Lewis-Charp said, were enrolled in short-term training programs, which often lasted between eight and 16 weeks. Relatively few were in the program to get twoyear or longer degrees.

"There were a lot of reasons for that," Lewis-Charp said. "Many had families to support, or they were enrolled to get a specific skills upgrade. We found that a total of 67 percent of veterans enrolled completed their courses.

"That's compared to 58 percent of the 4,000 regular student population we compared M-CAM students to."

- Further stats showed:
- 76 percent of over 55 completed their course work.
- 70 percent of 40-54 completed course work.
- 53 percent of 39 and under finished course work.
- 70 percent of female stu
- course work.

Khemani said the overall outcome of the program was positive. Many students received multiple certificates. They were able to track students after they completed their education. A total of 83 percent of students were employed three months after exiting the program.

"The question becomes is that 83 percent number a high figure," Khemani said. "Compared to the regular student population of 70 percent, the answer is yes. Employment of M-CAM students remained 10 percent high-

And, Khemani said, M-CAM students also received higher wages. About 70 percent of incumbent students - those who already had jobs - earned wage increases.

'We're excited by these numbers," Khemani said. "We noted specifically, that 51 percent of Macomb students earned wage increases. The average increase was 11 percent."

The big reason for that increase, Khemani said, was that MCC students were heavily weighted in the manufacturing courses.

Lewis-Charp said that each college got to set their own curriculum for students. They worked with area employers and created programs that met the needs of their individual communities. Eight different schools in eight different parts of the state resulted in slightly different programs for each school.

Petrosky said that hearing outside parties confirm the anecdotal evidence they saw at MCC was gratifying.

"Now that the federal money is gone, we will incorporate what we've learned and apply it to fu-



Joe Petrosky

ture programs," Petrosky said. "We are always looking for funding from partners. MCC just received a large grant from the Ralph C. Wilson Foundation."

Part of what made the programs successful, Khemani said, was that the schools created programs that incorporated needed skills into the M-CAM curriculums that were taught to the program's students.

So when students learned welding, for example, they had to meet certified third-party welding standards to complete their coursework.

That proved to be valuable in the hiring process because emplyers were able to determine upfront that M-CAM trained job seekers had more than an academic training. They had been certified by organizations that the employer recognized.

The M-CAM program was created with specific goals in mind, Khemani said, and it appears that the schools were able to deliver on that promise. Students were able to learn and use what they learned for jobs.





Chevrolet Trucks portfolio of special editions, the 2018 Silverado and Colorado Centennial Editions feature design elements inspired by Chevy Trucks throughout history, including a distinctive Centennial Blue paint color and exclusive heritage bowtie emblems and 100 year badges inspired by colors and design cues found on early Chevrolet Trucks.

Stanczak also announced the nationwide rollout of the Truck Legends program, an exclusive community for those who have made Chevrolet Trucks some of the most iconic vehicles in America. The program recognizes the customers who own a Chevy Truck with more than 100,000 miles on the odometer or who have purchased or leased more than one new Chevy truck in their lifetime

Qualifying customers will join an active community that has grown to more than 5,400 members since its launch in Texas in September 2016. The community

#### Funding for Code Learning CONTINUED FROM PAGE 1

Ivanka Trump said it is crucial that young people, especially girls and racial minorities, learn how to write computer code and study computer science.

"We have to do better. We are going to do better, and this is a giant leap forward in that direction," she said during the panel discussion, which also included Dan Gilbert, chairman of Quicken Loans; Hadi Partovi, CEO of Code.org; Rob Acker, CEO of Salesforce.org; and Marillyn Hewson, CEO of Lockheed Martin.

Gilbert said teaching schoolchildren computer science "isn't one of these things where maybe this will work.

"This is the answer. This is flat-out the answer," said Gilbert, who also owns the Cleveland Cavaliers of the NBA.

#### **TECH CENTER NEWS - WARREN**

## FCA Foundation Supporting Local Charity Organizations

table arm of North American automaker FCA US gave out six lum. Through its engagement grants, totaling nearly \$900,000, to support academic and nonprofit organizations across the United States that help students pre-K through post-secondary - build the skills and competencies that support student achievement.

Many of these collaborations focus particularly on programs designed to expand science, technology, engineering and math (STEM) skills and opportunities among youth, said Fiat Chrysler spokesman Kevin Frazier.

"At FCA, we believe that education is an essential element in creating strong and sustainable communities," said Shane Karr, head of External Affairs, FCA -North America and president, FCA Foundation. "These grants will help students overcome obstacles, improve academic performance and gain practical skills that will help them succeed and mature into resilient, responsible members of the community.

The FCA Foundation provided grants to the following organizations:

• \$250,000: Communities In Schools (CIS): Working directly in more than 2,300 low-income schools in 25 states and the District of Columbia, CIS' model of Integrated Student Supports is proven to keep the most vulnerable students in school and on the path to graduation.

• \$25,000: Detroit Area Pre-College Engineering Program (DAPCEP): DAPCEP seeks to increase student interest in STEM topics and assist in the academic preparation needed to graduate

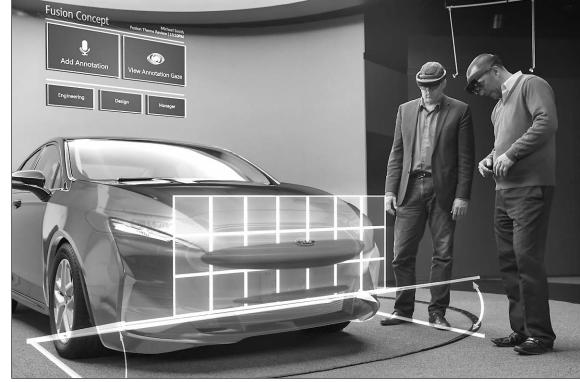
The FCA Foundation, the chari- from high school and succeed in a university-level STEM curricuwith numerous corporations, public, charter and private schools, and eight colleges and universities, DAPCEP anticipates that its weekend, in-school, afterschool and summer programs will reach nearly 8,000 pre-K to 12th grade students.

• \$265,000: FIRST in Michigan: Grants will support 76 FIRST Robotics Competition (FRC), FIRST Tech Challenge (FTC) and FIRST Lego League (FLL) teams across the United States, helping students offset the costs of competing, including registration fees, parts and materials and team apparel.

• \$200,000: National College Access Network (NCAN): NCAN works to promote best practices and to build capacity for college access and success through its support of organizations that help underrepresented middle and high school students aspire to, apply to, enter and succeed in college.

• \$50,000: Winning Futures: Through its Life Skills & Career Readiness Mentoring Program, Winning Futures matches at-risk and disadvantaged students with mentors from the metro Detroit business community whom then help teach the life skills necessary to become successful, productive citizens.

• \$50,000: Women of Tomorrow: Through a unique mentoring program with highly accomplished professional women and scholarship opportunities, Women of Tomorrow helps atrisk young women (grades 9-12) in Michigan successfully navigate the transition from adolescence to young adulthood.



Ford designers use holographic tech to quickly view potential vehicle design changes.

## Ford Sees the Light with Hologram Tech

When it comes to seeing po- the weeks and months it can take tential vehicle designs, Ford is learning how to light it up.

Ford designers have been swapping some clay-sculpting steels and rakes for mixed reality headsets and visualization software that can change vehicle design elements – side mirrors, grilles, vehicle interiors and more - in mere seconds, said Ford spokesman Wes Sherwood.

Designers have been piloting Microsoft HoloLens technology for a year now in Ford's Dearborn studios, Sherwood said, allowing them to see proposed virtual design elements as if these pieces were part of physical vehicles.

They've been able to explore different shapes, sizes and textures of future vehicle attributes in minutes and hours instead of to create clay models. And now, Ford is expanding this pioneering testing across the globe.

"It's amazing we can combine the old and the new - clay models and holograms – in a way that both saves time and allows designers to experiment and iterate quickly to dream up even more stylish, clever vehicles," says Jim Holland, Ford v.p., vehicle component and systems engineering. "Microsoft HoloLens is a powerful tool for designers as we continue to reimagine vehicles and mobility experiences in fastchanging times."

HoloLens technology uses mixed reality, which enables designers to see holograms in photo-quality backdrops through wire-free headsets, Holland said. They can scroll and preview at the flick of a finger through numerous design variations projected virtually onto an actual car or clay model.

"We may not be able to teleport yet, but HoloLens allows us to review full-size 3D designs with designers and engineers around the world in real time," savs Craig Wetzel, Ford manager, design technical operations. "And we've only just scratched the surface, so possibilities for the future seem almost limitless. This is very exciting.'

As designers wearing headsets move around an actual vehicle, Holland said the Microsoft HoloLens scans and maps the environment far more accurately than GPS to render holograms and images from the angle at which the vehicle is being viewed. A Windows 10 computer embedded in the headsets brings the power of the operating system to a holographic device that is untethered, wearable and mo-

already part of the vehicle - allowing them to quickly evaluate the design, make changes, and determine styling options earlier in development.

"With HoloLens, we can instantly flip through virtual representations to decide which direction they should go," says Michael Smith, Ford design manager. "As a designer, you want to show, not just tell. This is much more compelling."

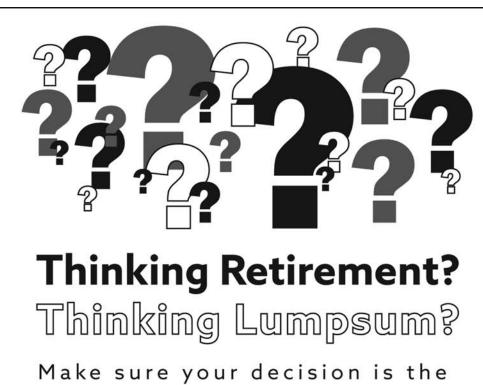
Ford has adapted HoloLens technology to enable designers to collaborate with engineers to better understand the customer experience, too, Smith said. For example, the technology allows a designer and engineer to evaluate in near-real time how a new side mirror looks aesthetically, as well as the customer's view of the vehicle's surroundings.

Whereas today it can take days, even weeks, to study a grille design, Smith said HoloLens allows designers and engineers to explore a variety of different iterations in a matter of hours.

The headsets can even be synced to allow multiple team members to view a design simultaneously, making collaboration easy. They can also record audio notes - high-tech "sticky notes" for team members working in other time zones or off-site.

Beyond the global design test, Ford is investigating how to bring HoloLens technology into more engineering development processes to further bolster the company's lead in using advanced visualization technologies such as virtual reality.

"HoloLens allows a whole team of people to collaborate, share and experience ideas together," says Elizabeth Baron, Ford virtual reality and advanced visualization technical specialist. "Mixing virtual and physical models is exciting, because it helps our designers and engineers communicate effectively and ideate to see what the future looks like earlier in the process."



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#### bile.

Traditionally, designers and engineers have to wear headsets that rely on cables tethered to a PC. Designers see 3D holographic images of themes and features as though these elements were



## Delphi Unveils New Names After Months of Waiting

CONTINUED FROM PAGE 1

Delphi made the announcement during its Investor Day in Boston, where it discussed the business strategies for both Aptiv and Delphi Technologies.

In addition, the company also announced that it will hold a special meeting of shareholders on Tuesday, Nov. 7, 2017 at 9 a.m. to seek shareholder approval of the name change.

'The names Aptiv and Delphi Technologies clearly reflect the independent identities, visions and directions of the two companies, each a global leader in its industry," said Kevin Clark, Delphi president and chief executive officer. "Both will continue to embody Delphi's core themes of safe, green, and connected, with the autonomy and expertise to react to the rapidly changing dynamics in the automotive industry and solve its customers' most complex challenges. Customers, employees, partners and shareholders will benefit from the separation into two independent and well-resourced companies with the flexibility to invest and grow even faster and more profitably than today.'

Aptiv, Clark said, comprises the Electronics & Safety and Architec-Electrical/Electronic ture businesses, will focus on accelerating the commercialization of active safety, autonomous driving, enhanced user experiences and connected services, providing the software, advanced computing platforms and networking architecture required to do so - the 'brain' and the 'nervous system' of the vehicle. Clarkwill remain as CEO of Aptiv.

'The vehicle has evolved and so have we," Clark said. "We

have expanded upon our heritage of industry firsts with advanced software capabilities and deep systems integration expertise, enabling us to develop intelligent solutions to meet mobility's toughest challenges. The future demands executional excellence. and this is where Aptiv thrives. The name 'Aptiv' reflects knowledge, adaptiveness and drive, as well as an ability to not only envision the future, but to make it real.'

The powertrain business will carry the name Delphi Technologies, Peteson said, leveraging the historical strength of the Delphi brand with core OEM and aftermarket customers, as it focuses on enabling advanced vehicle propulsion through combustion, software and controls and electrification.

Liam Butterworth will become CEO of Delphi following completion of the spin off. He is currently senior vice president and president of Powertrain.

"The entire Delphi Technologies organization is energized to move forward as a focused company." said Butterworth. "We are uniquely positioned with the technical competency and execution capability to deliver advanced vehicle propulsion systems that help our customers meet increasingly stringent regulatory standards while unlocking the power to support the ever-increasing electrical content being added to vehicles.'

At the Sept. 27 I sessions, Clark and Butterworth outlined their plans for the companies and how each will lead its industry, with capabilities designed to meet the evolving needs of their customers and how it will create value for shareholders.

BorgWarner, a global provider in clean and efficient technology solutions for combustion, hybrid and electric vehicles, offers the growing hybrid and electric commercial vehicle market a broad product portfolio to help meet emissions regulations and fuel economy goals.

The hybrid and electric commercial vehicle market is expected to experience a 32.9 percent compound annual growth rate (CAGR), increasing from 49,000 units in 2017 to 115,000 units in 2020, said BorgWarner spokeswoman Katva Pruett.

"The growth drivers in commercial vehicle propulsion systems are changing. While environmental impact and fuel economy continue to be key concerns, truck and transit fleets are now confronted with new challenges from a growing list of urban areas where combustion engines are restricted due to zeroemissions zones and noise-sensitive areas," said Christopher P. Thomas, Chief Technology Officer, BorgWarner. "BorgWarner's latest technologies will help bring new, cleaner hybrid and electric options to larger fleet vehicles.'

Featuring patented High Voltage Hairpin (HVH) stator winding technology, BorgWarner's versatile HVH410 and HVH 250 electric motors provide industry-leading power and torque densities with a power output of up to 300 kW (402 horsepower) and peak efficiencies of over 95 percent. HVH410 electric motors deliver a maximum torque of 2,000 Nm for class 7 and 8 hybrid and electric applications, while HVH250 electric motors deliver a maximum torque of 425 Nm.

In addition, BorgWarner's 48volt high efficiency motor/generators provide higher system efficiency and improved energy recovery capability to meet increasing power demands.

BorgWarner's eBooster electrically driven compressor has already been applied within the market and is useful for smaller commercial engines with less than 5 liters of displacement. A larger unit is also in development for engines with up to 13 liters of displacement.

BorgWarner's eTurbo technology takes electrified boosting one step further with the ability to generate power to recharge vehicle batteries. The eTurbo is

being developed in two sizes to serve both small and large commercial vehicle engines.

Further examples of electrified turbomachinery are also in development both internally and with customers, including an ORC (Organic Rankine Cycle) expander with electrical output, an eTurbocompounding turbine generator and a gas turbine range extender for use on commercial electric vehicles.

BorgWarner showed its tech at the North American Commercial Vehicle Show in Atlanta.

#### Volvo Invests \$500M in U.S. Factory

**BUICK** 

DETROIT (AP) - Volvo Cars is adding 1,900 jobs and an additional vehicle to its South Carolina assembly plant, which is still under construction.

The company says it will build its XC90 SUV at the plant near Charleston starting in 2021. It also announced a new office building near the plant.

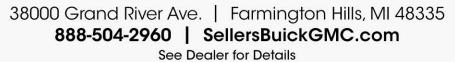
Volvo is spending \$500 million to build the plant. The new investment will bring the project's total price tag to \$1.1 billion.

The automaker broke ground on the assembly plant in 2015 and is currently hiring 2,000 workers

The plant is scheduled to start production of the Volvo S60 sedan next fall.

Volvo eventually expects to make 150,000 vehicles per year at the plant, which is the company's first in the U.S.

Volvo Cars has been owned by Chinese automaker Geely since 2010.



## **BorgWarner Offering EV Parts Solutions**



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## **State Pondering New Car Insurance Regs**

LANSING, Mich. (AP) - Michigan drivers would no longer be required to buy unlimited medical insurance to cover serious crash injuries under legislation that high-ranking supporters proposed Sept. 26 to significantly reduce the country's most expensive auto premiums.

Michigan is the only state to mandate unlimited benefits. The bill backed by House Speaker Tom Leonard, Detroit Mayor Mike Duggan and others would let motorists stick with unlimited coverage or instead choose \$250,000 or \$500,000 of coverage still a much higher level than is required in all but one other state, New Jersey, where it is \$250,000.

Michigan drivers buying \$250,000 of coverage would be guaranteed a 40 percent cut in personal injury protection fees, equaling a 20 percent reduction in the overall cost of a comprehensive policy and a nearly 50 percent cut on a basic policy. Those age 62 and older who have Medicare or other retiree health insurance - such as teachers, police and firefighters - could opt out entirely of personal injury protection, saving 35 percent.

"Forty-nine other states are doing just fine without this unlimited system," Duggan, whose city has the highest car insurance rates in the U.S. and where many residents "drive dirty" with no insurance, said at a Capitol news conference. He outlined scenarios where an average driver could save \$604 a year under the measure and a senior motorist could save \$1,105.

Under another cost-saving provision in the bill, auto insurers would reimburse set fees to health providers for treating people injured in car crashes, similar to how Medicare works. Car insurers now pay three to four times more for X-rays and other medical services than health insurers do.

Many Republican lawmakers, some Democrats, black civil rights leaders, the head of the state Chamber of Commerce and a prominent trial lawyer joined in pushing changes. But the new bill was immediately opposed by a coalition of health providers, plaintiffs' lawyers and patient advocates - whose concerns have blocked past legislative attempts to overhaul the insurance law, including legislation backed by Gov. Rick Snyder four years ago.

Critics said people with paralysis and brain injuries would not "get the care they need" and warned the legislation would shift costs to Medicaid. Proponents countered that their treatment would not stop but would be covered by their health insurer – not their auto insurer – once expenses exceeded \$250,000 or \$500,000.

In the Senate, Republican Majority Leader Arlan Meekhof opposes government-imposed rate rollbacks and fee schedules for auto-related injuries.

"We have a very broad coalition. That's what it's going to take to get this done," said Leonard, a Republican. The GOP bill sponsor, House Insurance

Committee Chairwoman Lana Theis, will begin hearings next week.

Michigan's annual average auto insurance premium is \$2,394, highest in the nation, according to Insure.com. The national average is \$1,318.

Michigan Health & Hospital Association CEO Brian Peters called the legislation a "nonstarter," saying it would not guarantee rate relief for all drivers, including those choosing unlimited personal injury coverage. Oakland County Executive L. Brooks Patterson, who was seriously injured in a 2012 crash and who holds sway with Republican legislators in Detroit's northern suburbs, called the bill a "robbery" that would benefit high-paid insurance executives.

But Pete Kuhnmuench, executive director of the Insurance Alliance of Michigan, said the system is "broken" and "outdated." The industry group supports three elements to curtail costs: targeting fraud, stopping medical providers from overcharging car insurers and giving consumers a choice in their level of medical coverage. Auto insurers have previously opposed required cuts in premiums but did not immediately weigh in on that component of the bill Sept. 26.



ANN ARBOR, Mich. (AP) -Tech giant Google is bringing its employees in Ann Arbor together under one roof and celebrating the opening of its new campus on the north side of the city.

The totally renovated 135,000square-foot space on Traverwood Drive is a far cry from Google's original office in Ann Arbor, a tiny space above Vinology on Ann Arbor's Main Street.

Today, from the grand staircase that winds up three floors, to work spaces devoted to Google's AdWords and DoubleClick programs, there's a feeling of newness and excitement as employees pour into the new office and make it their own.

"We're excited to get everyone back together in the same place, which is really what this grand opening represents for us," said Charles Scrase, co-site lead and director of Google Technical Services at Google Ann Arbor. "We are in process of moving everyone under the same roof as we speak.'

It's been more than two years since Google moved out of its downtown Ann Arbor space at the McKinley Towne Centre, which is now occupied by software company LLamasoft. The company has been operating at the Traverwood site as well as an office building near Briarwood Mall. "It was a difficult decision for us," said Tracy McNeilly, director of facilities for Google, about the construction of a new office building. "We weren't able to accommodate all of our needs downtown. This was an opportunity for us to continue to have an Ann Arbor presence and the ability to grow as needed.' The north side campus offers Google the opportunity to bring employees together from different locations in Ann Arbor, Scrase said, as renovations wind up on Phase 2 of construction. Those employees also had an active role in defining their new workspaces, McNeilly told The Ann Arbor News . Most Google offices have the same technology but are all unique in some way or another, he said. "It's really important to reflect the local culture and what that employee base views as important. No two Google offices are

the same," McNeilly said. "The employees play an active role in helping determine what is important and how they want to work."

The first phase of construction took into account how Google employees work, with work settings from cafe tables to elevated workspaces, with micro-kitchens on each floor to encourage workers to talk about their work in a more casual setting.

Google's email platform, Gmail, was developed as a result of a conversation at a micro-kitchen, said Eric Yuhasz, facilities manager for Michigan and Montreal.

"The next big idea could be a result of a casual collision,' Yuhasz said.

Scattered throughout the campus are amenities meant to alleviate employee stress and enhance the work experience like a massage studio, a cafeteria with vegan and vegetarian meal options, a fully-equipped fitness center and an on-staff barista for a quick pick-me-up.

You may even see some fourlegged companions walking around the office, as employees are welcome to bring in their dogs, as well as have their families visit them on campus from time to time.

"It's a really exciting place to be," said Karen Godwin, co-site lead and director of Google Marketing Solutions at Google Ann Arbor. Google officials declined to specify the amount of investment in the campus renovations, but said it was a "significant" amount. Officials said they wanted to maintain Google's presence in Ann Arbor for a variety of reasons: the talent base found in Michigan along with its emphasis on entrepreneurship and innovation. It even came down to the local culture, what Scrase identified as a "warm and friendly environment." "I think the thing that people talk about first and foremost when they talk about Ann Arbor is the people, the culture," Scrase said. "I also think it is the way in which people engage with each other and their communities."



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Google has more than 450 employees in Ann Arbor, and more than 600 employees in Michigan.



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