LIVESTREAM HOUR AUTOMOTIVE **INSIGHTS IN REAL TIME**

Join us every week Q&A's, COVID-19 updates, industry experts





Episode 2: US coronavirus crisis in focus

Running order

- Global crisis snapshot
- US vehicle sales outlook
- **INSIGHT on supply chain & manufacturing**
- Q&A with Kristin Dziczek, CAR

Take a break from coronavirus



Host: Christopher Ludwig, Editor-in-Chief



Guest: Kristin Dziczek, Vice-President, **Center for Automotive Research**

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Upcoming programme

April 15th – Livestream Hour: Tier Supplier Production Restart April 22nd – Livestream Hour: Indian Automotive Supply Chain Focus April 29th – Covid-19 Automotive Supply Chain April Update ...plus much more in supply chain, manufacturing & design

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Welcome to Livestream. Get ready to engage:

Submit your questions, comments or technical issues any time using the question box

If you would like to pose your comment or question **live via microphone** select the **raise hand** icon, and we will try to get to you during the Livestream. **Please turn on your microphone and ideally use headphone**.

*Note we will mute comments in which sound quality is poor or if any inappropriate comments are made

For questions we don't get to during the session, we'll produce answers to share with you as a follow up

Comments, experiences, disagreements are also welcome

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File View Help NUX ▼ Audio Sound Check = # ? Computer audio Phone call UTED Transmit (2- Plantronics Savi 7xx) Speakers (2- Plantronics Savi 7xx) Questions [Enter a question for staff]

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China – On the other side?

- Assembly plants restarted in all regions, still at around 50% levels
- March Sales down -50% year-on-year (compared to 80% in February)
- Wuhan lockdown ended today after 11 weeks might be indicator for economic and supply chain impact
- Wuhan GDP may have fallen 50%, supply chains are in disarray





Europe – At the peak?

- Most assembly plants closed with planned re-opening 'at least' to mid-April-early May...
- ...but many 'indefinite' dependent on restrictions, supply and demand
- Kia restarted some output in Slovakia on April 6th
- Austria, Germany plan potential loosening of some restrictions...UK, Italy, Spain likely prolonged
- March Sales down -50% year-on-year

"Obviously we will not restart if the local restrictions remain. Likewise, we know every plant will restart in a reduced manner as we have to ensure the safety of our workers. We need to move work stations so they are at least two metres apart and put screens in place and masks."

-Sue Slaughter, global purchasing director, Ford of Europe







East and South-East Asia – A new wave?

- Japan state of emergency with new restrictions
- Japan plants extending shutdowns due to supply and demand issues
- South Korea production to reduce on lower export demand
- OEMs suspending production in Thailand, Indonesia, Vietnam as containment measures tighten





India – No time to lose?

- All assembly plants closed, most expectations for restart early-to-mid May
- Lockdown came with no warning late March, could see partial lifting after April 15th
- Closing of state borders, major issues with migrant workers
- Questions over government support, regulatory issues
- March sales down -50% (on crisis and tax issue)





Latin America – ticking time bomb?

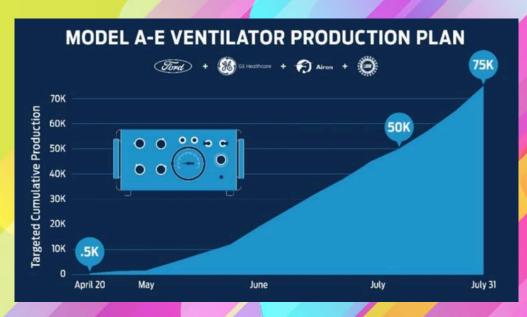
- Most assembly plants shut until at least mid-April to May
- Restrictions in most countries but differences between state and central government in Brazil and Mexico
- Brazil March Sales down -20% year-on-year, Mexico -30%





US – Heading into eye of the storm?

- Virtually all North America assembly plants closed, with some restarts provisionally ranging mid-April to early May – but many 'indefinite'
- Some early planned restarts (VW, Hyundai, Kia) could face supply issues
- Major state lockdowns including Northeast and Midwest likely to be extended
- Considerable focus on ventilator, PPE equipment
- Questions over regulatory & trade terms (i.e. tariff schedules, USMCA implementation)
- March sales -39%



INSIGHT: US passenger + commercial vehicle sales forecast



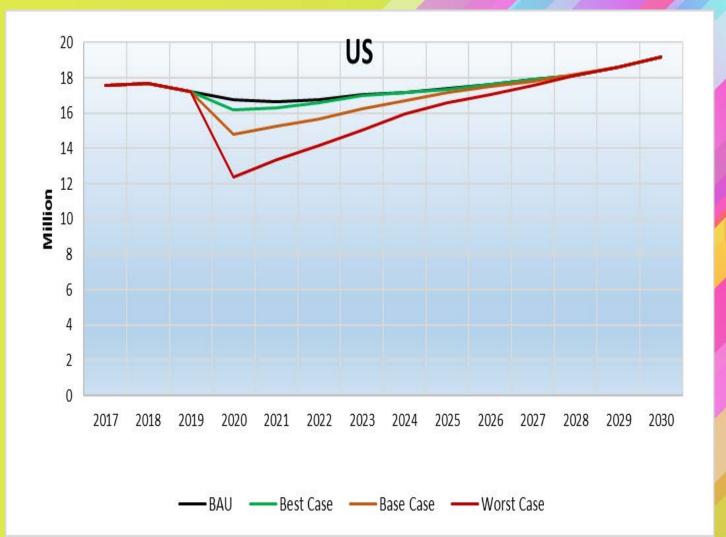
Best Case: -6% from 2019

Base Case: -14% from 2019

Worst Case: -28% from 2019

'V' vs 'U' vs 'W' vs 'L' to depend on virus containment, jobs recovery, stimulus, fiscal drag





Full forecast: automotivelogistics.media/40395.article

INSIGHT: Liquidity in the supply chain

Cash will be scarcest for smaller suppliers

- Wide shift to reduced hours, furloughing, lay offs
- OEMs extending credit line and accessing loans
- Accessing Federal stimulus and credit measures may be harder for smalland-medium-sized suppliers and dealers
- Some suppliers, equipment and service providers could run out of cash in matter of weeks – could lead to an acceleration in consolidation

What can the industry do?

- OEM and Tier 1 credit and liquidity to support distressed suppliers and providers, including faster payments, forward orders, maintaining contracts
- Cross-industry coordination on phasing in restarts

INSIGHT: Supply and logistics constraints

Demand shock likely worse but inventory issues could hamper restarts

- Border closures/delays and safety checks
- Critical supplies located in countries/regions still under lockdown
- Inventory and containers misaligned
- Freight constraints, including fleet reductions, re-allocation to essential supplies and lack of capacity in niche segments like vehicle logistics

What can the industry do?

- Cross-functional taskforce in purchasing, capacity planning, sales, production and logistics to track inventory and global supplier sources to determine constraints and alternatives
- Collaboration with providers on storage of key supplies and products extra inventory may support resilience post-crisis

INSIGHT: Employee and facility safety

Without a vaccine, new protection measures will be necessary

- Labour agreements on worker safety could change manufacturing and logistics processes
- Need to allow for safe distances, disinfection of surfaces & products
- Provision of personal protective equipment including face masks, shields, hand sanitizers (supply issue as demand could stretch into millions of units per day)
- Testing for virus

What can the industry do?

- Proactive redesign together with unions/workforce of facilities, material flow and working shifts in plants, warehouses, offices
- Establish cross-industry guidelines, including on PPE standards
- Maintain and amplify supply chain for medical relief for post-crisis

Questions to consider...what are your thoughts?

How long can companies survive the shutdown and demand shock?

What are most important government support mechanism to access?

How should industry work with government on trade issues, i.e. USMCA?

What are the supply risks for restart and how should be they mitigated?

How should processes be redesigned to prevent virus spread?

What will be overall impact of US competitiveness in global supply chain?

Can the post-2009 US auto recovery and renaissance be repeated?

Q&A



Kristin Dziczek, Vice-President, Center for Automotive Research

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Precept - Polestar's manifesto of intent

By Maxine Morland | 07 April 2020 www.cardesignnews.com/4044 00000 7.article

An elegant, ethical, performance concept from Polestar

The Polestar Precept concept car was intended for a Geneva 2020 launch, and we were fairly excited to have a look at what Polestar had been working on. The Polestar 2 was innovative, in many ways, but was also based on an old Volvo concept. The Precept is the first concept car designed from scratch by the Polestar team.

Yesterday, Polestar released a batch of images of the Precept and a few videos too, giving the concept a virtual lauch. Striking design features abound. The overall aesthetic is in line with what we have come to expect from this EV brand: tech-focussed, functional, with a confident expression of classic proportions and understated elegance. Materials have been ethically sourced - so far so unexpected. But this concept takes the Polestar brand identity much further. New materials have clearly been properly developed with suppliers such as Bcomp, with careful thought going into not just the materials themselves, but the sustainability of how they are applied.



The front light signature, Thor's Hammer, first seen on the Volvo XC90 in 2014, is now split along the horizontal edge, in what Ingeniath describes as 'an evolution to a more robotic Polestar style'.

www.automotivemanufacturing solutions.com/40431.article

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Audi mobile maintenance app keeps Ingolstadt in the know

By Mike Farish | 02 April 2020

INDUSTRY 4.0

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Maintenance teams at the Ingolstadt factory have a new app on test, developed an inhouse to provide live updates from across the assembly process direct to their smartphones



tenance teams at the Inpolstadt factory are testing out 'Audi Mobile Maintenance App developed inhouse to give live updates from assembly line performance

The application of Industry 4.0 in the area of shopfloor communications has proved particularly successful, enabling personnel to react quickly to developing situations in the production environment.

One example of this is at Audi's Ingolstadt factory in southern German where 150 maintenance staff have been testing out an Audi Mobili Maintenance App' that updates them automatically with information a defects as they occur by means of text messages to standard smartp



The details of the initiative are confirmed by Matthias Herold, project manager for the maintenance app. "All systems in the assembly shops at



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Get in touch if interested

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