Digital Twin is transforming Insurance Claims

“The New Frontier of Insurance” an Insurance Expert Panel Meeting

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Digital Twin

attempts to mimic real time behavior of a physical object.

Represents a single source-of-truth

Holistic understanding of an entity in near real-life for new insurance related services and customer experiences

What happened?

Why did it happen?

What will happen?

What should or shall I do?
Highly personalized, interconnected, interactive services remove established boundaries and shift the roles of service providers.
The role of claims adjuster is expected to shift towards enabling better decisions and enhancing customer experience.
How long can Insurance carriers afford to take time to adopt and utilize Digital Twin?

Digital Twin is expected to reach plateau in 2 to 5 years.

Digital Twin technologies are expected to transform the market.

Additional steps to utilize Digital Twin capabilities in Insurance

- Partner eco-systems
- Future way of working
- Legacy IT
- External data
- Customer data

Source: Gartner Group: Hype Cycle for the Internet of Things, 2021
Who will win the race and provide insurance related services by utilizing Digital Twin?

- **Insurance carriers** by using their high reputation and trust
- **Manufacturers** by transforming from car sellers to mobility service provider
- **Technology experts** by leveraging their customer understanding expertise
- **Eco-system orchestrators** by utilizing their financial strength and unique market differentiation
Automotive, Insurances and other industries are increasingly leveraging Digital Twin to add value to their products and services.

**Automotive (truck) Manufacturer**
Selling truck fleets with higher safety, uptime and lower TCO by improving drivers’ behavior, maintenance, energy consumption and other factors.

**P&C Commercial Insurance**
Remote risk & property value assessments by using geospatial based advanced imagery analysis.

**International Airlines**
Automated detection of Airplane condition by recognizing of up to 1 cm surface damages.

**Launching Autonomous car in the market**
Digital Twin is the heart of the autonomous car and we are currently developing it with a car manufacturer.
# Behavioral driving framework

## Collecting data

<table>
<thead>
<tr>
<th>VEHICLE</th>
<th>ENTREPRISE</th>
<th>PARTNER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic Control Units</td>
<td>Fuel Costs, Consumption</td>
<td>Maint, Logs Costs Repair Data</td>
</tr>
<tr>
<td>Driving Behaviors, Health related data</td>
<td>Consignment details, weight</td>
<td>Product &amp; Engineering</td>
</tr>
<tr>
<td>Video images</td>
<td></td>
<td>Weather, Traffic, Route, Terrain</td>
</tr>
</tbody>
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## Data understanding & decisions

### Descriptive
- Fuel efficiency score for truck category

### Diagnostic
- Traffic conditions
- Greater % duration of driving in lower gear position

### Predictive
- Increased engine wear and tear
- Increased carbon emissions
- Maintenance requirement increases

### Prescriptive
- Evaluate changes to route/times
- Optimal time of day schedules
- Gear shifts at optimal speeds

## Setting actions

feedback and advices to the driver

behavioral driving adaptation

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But what about the drivers’ motivation? A Game awards drivers’ behavioral adaption to increase driving safety and driving economy.
We currently enable our Client to become a vehicle data supplier

- **OEM build in devices**
  - Vehicle own OEM
  - Custom IoT devices
  - OEM build in devices
  - Vehicle foreign OEM
- **Partner data**
- **API Platform**
- **Customers**
  - Consuming unified real time vehicle data

Unified vehicle data

Eco-system partner data

Subscribe & Consume real time data
Lessons learned

- Highly diversified automotive real time data proprietary structures increases complexity
- Challenges on dealing country regulations on data to use and to share
- Challenging adoption of real time data-based services by consumers
- Providing Digital Twin based services is a journey with employees, customers and partners.
Possible adaption of our experiences in motor insurance

1. Gamify, award and reward drivers as they adapt driving behavior to prevent damage

2. Real time risk estimation (enabled by ML)

3. Automate car damage recognition based on video from an app and/or a drone

4. Vehicle real time data standardization across OEMs as a foundation for building insurance digital twins
Digital Twin is expected to transform the market and Insurances need to take action today and start their Digital Twin journey today.

1. Co-creation
   Engage and prototype
   Engage with partners and build a community conducting regular discussions and generating ideas about new DT enabled services.

2. System of Decisions
   Evolve System-of-Decisions
   A centralized machine learning enabled System-of-Decisions using systems-of-Records, customer experience and digital twin data to build a main Claims transformation driver with partners.

3. Partner Integration
   Foster Partner Integration
   Enable open Insurance API architectures to integrate with partners and to build insurance related DT.

4. Organizational readiness
   Mobilize the Organization
   Generate awareness on becoming a learning organization to implement the future-of-work.
For the Aston Martin Cognizant Formula One Team, we’ll be heavily focused trackside, applying 5G, IoT, and data analytics to support critical decision-making. This will include building a “Digital Twin” (or virtual replica) of their F1 cars and using artificial intelligence (AI) and machine learning to run simulations and make predictions based on both real-time and past-performance data.

- Brian Humphries, CEO Cognizant