Microsoft Opportunities in Automotive & Mobility

AMT SLT Review (less airlines, rail, shipping, and hospitality)
Pre-read for SLT meeting on October 15th, 2021

0. EXECUTIVE SUMMARY

This memo articulates Microsoft's strategic ambitions within the Automotive, Mobility and Transport (AMT) space and highlights the key pillars of our strategy (focusing on the vehicle driven Auto & Mobility market and thereby omitting airlines, rail, shipping, and hospitality).

With over $6T in total industry revenues and $42B of fast-growing Core TAM (12% FY21-26 CAGR), Auto & Mobility represents one of the largest, most dynamic, and financially important sectors for Microsoft. Major exogenous disruptions and new, cloud-native players are pressuring incumbent OEMs, Tier 1 suppliers, and traditional mobility service providers to invest more in technology than ever before to improve their core operations, creating opportunity for our existing cloud solutions. At the same time a new mobility-led value chain is emerging that could potentially create an additional $60-90B of new TAM over the next decade. Over time, both traditional OEMs and new players will represent an increasingly strategically important opportunity as Connected Vehicles (CV) and eventually autonomous vehicles (AV) will generate vast amounts of sensor data, requiring large compute across the cloud and edge and could represent the largest cloud workloads in the future.

With these disruptive trends and expanded customer base, we clearly see several opportunities for Microsoft to capture substantial value and grow our $2.8B business to $10B+ by FY26.

***Sell more of what's on the truck:** With >70% of our revenue today coming from Enterprise Functions (i.e., productivity solutions), our first priority is to unlock our potential in the other core business domains of our customers (Customer, Operations, and Products & Services) where we already possess differentiated solutions, and to improve our footprint in mobility service providers. To that end, we need to dedicate a focused set of resources to improve reference architectures, create industry-specific marketing materials, dedicate engineering resources to high ROI initiatives, build our ecosystem of partners, and create new sales motions to pursue innovative new entrants. With these resources, we can grow our existing products and solutions to $8.0B by FY26, and grow Azure to more than 50% of total Auto & Mobility revenue.*

***Build a differentiated position with the SDV Open Ecosystem:** As we execute with our current product suite, we also earn our right to expand into new TAM and even create new TAM for the industry. We are uniquely positioned to enable our OEM and Tier 1 customers to finally build the Software Defined Vehicle (SDV) capabilities to navigate the most significant evolution of vehicle electronic and electrical (EE) architecture in history, all while enabling them to keep control of their destiny in their own hands. By providing an open source toolchain, with partners and a first OEM customer, we can ignite the SDV Open Ecosystem and ultimately transform how the entire industry designs, builds, updates, and monetizes vehicles. This approach will generate an additional $2.5B of FY26 revenue from OEMs, and create a strategic control point for the enablement of vehicle-based mobility services. This open ecosystem approach could allow Microsoft to differentiate versus Amazon and Google, by positioning Azure as the cloud that is most on the side of the OEMs.*

***Establish a new category of mobility solutions:** We can capture value in a new, mobility-led value chain by building the shared, open platform for participants and specific solutions to address the needs of mobility and fleet providers, new entrant OEMs, and AV providers. This will position Microsoft to develop and shape the emerging mobility-led value chain.*

1. AMBITION

Our AMT industry ambition is to grow our current Auto & Mobility business from $2.8B FY21 to $10B+ by FY26, double our market share in a fast-growing market (from 7% to 14%). We will become the leading AMT Intelligent Cloud &

Edge provider by enabling current Auto & Mobility players to benefit from disruptive industry trends and actively shape the development of a new mobility-led value chain and ecosystem.

2. AMT MARKET AND OPPORTUNITIES

AMT, the market for movement of people and goods, is one of the largest and most dynamic ecosystems globally. For this memo, we will focus on Auto & Mobility (excluding non-vehicle transport such as airlines or rail), a market which represents $6T in global revenues today and is projected to grow to $11T by 2030 (~6% CAGR).[1]

Technological disruptions from CASE will define the Auto & Mobility industry in the coming decades; there is a tremendous opportunity for hyperscale cloud providers to enable the industry transformation

The Auto & Mobility market is undergoing large-scale disruption driven by several interconnected technological shifts, collectively referred to as "CASE" (Connected, Autonomous, Shared, Electric). These technological shifts will be blurred with many happening in tandem and will define not only the Auto & Mobility industries but also meaningfully impact other adjacent industries (e.g., transport, eCommerce, insurance, real estate) for the coming decades. Enabling the transformation of the Auto & Mobility industry is a tremendous opportunity for hyperscale cloud providers not only to empower our customers but also to capture strategically relevant Cloud workloads; vehicles today produce 100-400 GB of data per day while L4 (fully autonomous) test vehicles produce 15-90 TB of data per day. In fact, some believe that Auto & Mobility workloads could represent the largest workloads for the cloud in the future.

Technological disruptions and growth of new entrants are pressuring incumbent OEMs to invest in new manufacturing approaches and new service-oriented businesses

The disruptive CASE trends are leading to the emergence of software-driven vehicle engineering, new services-based business models, and an influx of new players across all segments of the market, including vehicle manufacturing, autonomous development, and mobility (see Appendix 2).

The manufacturing of EVs neutralizes some of the traditional sources of advantage for the OEMs (e.g., the design of Internal Combustion Engine (ICE)) and facilitates the entrance of new OEMs who are unburdened by legacy manufacturing footprints and can take a software-led, "iPhone on wheels" approach to developing EVs. Tesla, an early mover in the market, has pursued a vertically integrated and software-led approach to gain substantial traction in the market (~0.5M vehicles sold in 2020)[2]. Other greenfield OEMs (e.g., Arrival) and electronics manufacturers (e.g., Foxconn) are now entering the space. Traditional OEMs were initially caught off-guard and now are investing aggressively to catch up.

While scaled *autonomous deployments* are still 5-10+ years away for select use cases, many autonomous developers (e.g., Cruise, Waymo, Wayve), in partnership with OEMs and Big Tech companies, are investing heavily in simulation, testing, and development, as well as in building out nascent mobility business models. Since 2010, ~$206B has been invested in AV and new smart mobility companies[3]. Additionally, a suite of new mobility players with innovative business models (e.g., Go-Puff, GIG Car Share) are taking share from traditional providers (e.g., car rentals, logistics companies, public transport). These new entrants create pressure on today's dominant OEMs and Tier 1s to adapt their approaches across the vehicle and customer lifecycle.

Traditional OEMs are hesitant to be locked into any one technology provider but are unlikely to make the transition to a CASE reality alone

Challenged to revamp the vehicle development process, OEMs and Tier 1s need to build intelligence systems over their existing manufacturing equipment and solutions. They will rely on Big Tech partners to build connectivity on top of their fragmented systems and data estates. Current estimates put the cloud value of connecting plant floors and

[1] Vehicle-driven Mobility collectively accounts for 70% of our Microsoft's total AMT revenue of $3.15B in FY21.
[2] Tesla Q4 2020 Press Release (Jan 2021)
[3] McKinsey & Co. Mobility's future (April 2021)

manufacturing applications at $1-6M per factory/year (size dependent) and TBs of data daily between all the supplier/OEMs.[4]

OEMs traditionally relied on Tier 1s and other suppliers for their electronics and software development, and lack the in-house expertise to pivot to a software defined vehicle quickly due to their legacy technology and car culture. They are also resistant for them to become the "Foxconn of Auto" by becoming dependent on a single source, such as Tier 1 or a Big Tech provider. However, making the leap to SDV is existential to OEMs facing increased competition from new entrants, who need to transition their business models from one-time vehicles sales into services-based models (e.g., Tesla's "full self-driving" subscription, in-vehicle streaming).

In the long term a new value chain could emerge centered around mobility services

The rise in commercial fleets from eCommerce, and a shift towards pay-per-use / shared mobility, coupled with the influx of new mobility entrants could lead to the emergence of a new value chain (see Appendix 6). While traditional auto value chains are led by OEMs, this new value chain would be Mobility Service provider led. Flexible manufacturers (e.g., Arrival), with capabilities to generate profits on smaller volume batches of vehicles, will work with mobility providers to design and create purpose-built vehicles, while autonomous developers (e.g., Wayve, Cruise) will choose either to play directly as Mobility providers or license their technology to fleets. A robust ecosystem of ISVs will be combined to support a broad set of mobility operations (e.g., localization, data-sharing & monetization etc.)

This emergent mobility-led value chain will be tech intensive (e.g., high quality, sticky workloads from connected vehicles, autonomous vehicles, and edge data collection from fleets), fast growing, and will require not yet established systems (including the SDV Open Ecosystem) to extensively coordinate and operate across the value chain from vehicle design and operations to integration with transport networks. We believe this value chain could collectively create an additional $60-90B of TAM by FY26 and has no natural winner, creating a jump-ball situation for cloud providers to help shape the value chain and capture value.

3. MICROSOFT'S CURRENT BUSINESS

While we have strong growth in Auto & Mobility today, we are underpenetrated outside of Enterprise Functions, and this is our primary area of focus for future growth

Area (Buyer)		FY26 Core TAM (B)	Industry Priority Scenarios and Offerings	FY21 Revenue (B)	FY26 Revenue Goal (B)	5-year CAGR
Enterprise Functions *(CIO, CFO)*		$32**	Increased Organizational Productivity: Modern Workplace, low-code dev., data center modernization, SAP/Oracle on Azure	$2.0	$3.7	13%
Core Business Domains	Customer *(CMO, VP of Sales, CX)*	$9	Differentiated Customer Experience: Customer Data Platform, digital marketing, customer journey management, customer care	$0.2	$0.8	30%
	Operations *(COO, VP of MFG.)*	$17	Resilient operations: Connected factories, integrated supply chain, real-time inventory, control tower operations	$0.2	$1.3	40%
	Products & Services *(CPO, VP of Eng., R&D)*	$18	Accelerated Vehicle Innovation, Emerging Mobility Services: MCVP/MADP, dev/ML ops, digital engineering, HPC, Fleet management, data sharing & monetization, sustainability, electrification	$0.3	$2.2	50%
			Software Defined Vehicle	$0.0	$2.5	NA
Total Auto & Mobility*		**$77B**		**$2.8**	**$10.5**	**30%**

*FY26 Revenue goal is $8B excluding SDV, growing at a 23% CAGR

** Includes some horizonal workloads that could not be attributed across segments

The Auto & Mobility space is a strategically critical area for Microsoft, as the industry is early in its digital transformation, and emerging connected and autonomous vehicles will create one of the largest and richest datasets

[4] Internal analysis based on Microsoft partnership with ZF and our owned Xbox and Surface manufacturing (Q1 FY21)

of the future. As a result, IDC expects technology spend to grow significantly, with the Core TAM for Auto & Mobility rising from ~$42B today to ~$77B by FY26 (12% CAGR)[5]. Cloud spend is expected to grow even more rapidly in the next 5 years (19% CAGR), and by FY26 will account for 54% of Core TAM, up from 41% today. In FY21, Microsoft generated $2.8B in vehicle-related revenue, growing at 18% Y/Y; however, FY21 growth was depressed by pandemic-driven industry challenges, including supply chain issues, including a chip shortage that continues to impact production. YTD growth has rebounded to 26%. ACR in FY21 was ~$0.6B, up 44% Y/Y, but accounted for only 22% of revenue.

Enterprise Functions: Our core strength today lies in organizational productivity solutions, specifically in Modern Work, which generated $2B (~70%) of our FY21 Auto & Mobility Revenue. Azure consumption is still heavily biased towards infrastructure workloads (~75% of ACR), and we need to seize the opportunity to support our customers' transformation across all domains of their business and in turn expand beyond infrastructure into the stickier data & AI workloads, including heavy compute (See Appendix D).

By FY26 we aspire to grow our revenue to $10B+, to have the majority of this revenue (60%) coming from the Core Business Domains (Customer, Operations, and Product), and for over half of revenue to come from Azure.

Customer: Despite Auto OEMs represent some of the largest digital marketing budgets globally, we are underpenetrated across our digital marketing and customer experience solutions. As OEMs develop DTC business models, the opportunity for individualized marketing expands dramatically, and they will require support in managing and activating their customer data.

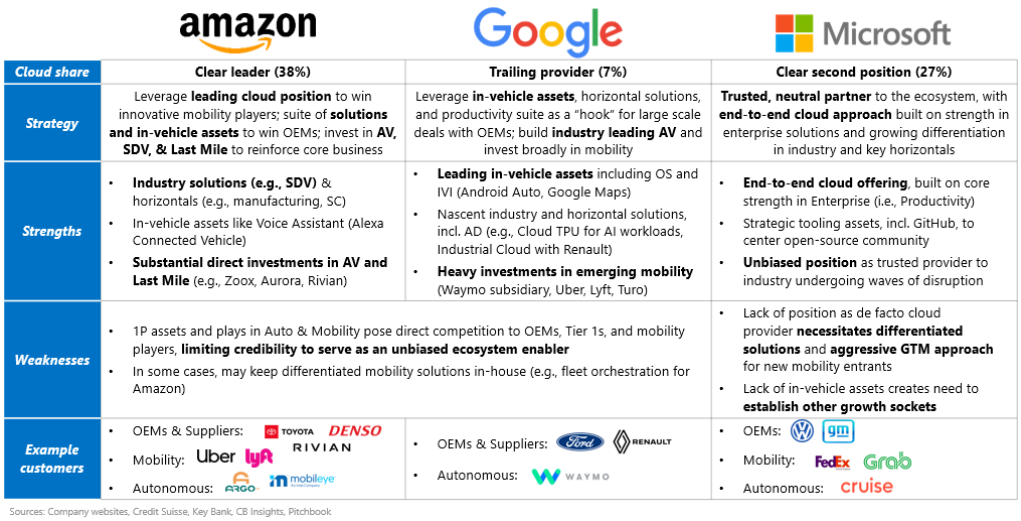
Operations: Even though Auto & Mobility represents one of the largest manufacturing sectors globally (6 of 10 top manufacturers by revenue are Auto OEMs)[6] with highly complex global value chains, we are underpenetrated across our Operations portfolio. We have nascent traction with our manufacturing and supply chain solutions (e.g., recent ZF win in Connected Factory, which will expand to 192 ZF factories), and have an opportunity to grow our share.

Products & Services: We made two significant bets to play in new TAM with Connected Vehicle Platform (MCVP) and Autonomous Development Platform (MADP) both of which will release in FY22. These platforms enable many of the products and services that comprise our long-term strategy for the industry to enable an end-to-end digital feedback loop, including SDV and mobility solutions.

4. COMPETITIVE CONTEXT

Our competitors' have strategic in-vehicle assets and cloud industry solutions, however, their 1P plays limit their credibility as an unbiased ecosystem enabler

[5] IDC AMT Data (August, 2021)
[6] 2020 Forbes Fortune 500 rankings



Amazon is the clear leader in Auto & Mobility IaaS and PaaS today, with 38% share and an estimated ~$2B/year[7] in AWS revenue. Amazon leads with strengths in logistics and distribution, product design, and manufacturing as it courts the Auto & Mobility industry and has solutions across connected car and AD. Amazon is aggressively targeting enterprise manufacturing and supply chain, recruiting domain experts to lead COO conversations and using a playbook of free POCs, fast onsite delivery (Sprint0 starts in <4 weeks), and large ECIF to encourage extended lines of business migrations. Furthermore, *AWS is investing in a software-defined vehicle future through partnerships with Arm* and key industry players including Continental and CARIAD (Volkswagen software), creating new software architecture and reference implementation.[8]

Google has the smallest position of the three cloud providers, estimated to be ~$500M/year[9] of GCP revenue. Google promotes its expertise in AV development (Cloud TPUs for AI workloads), shared mobility solutions (Google Maps Ridesharing Platforms), customer insights (data and AI), digital manufacturing (ML/AI) and connected vehicle (Cloud IOT Core, GAS, Android Automotive). *This range of in-vehicle assets and cloud solutions allows GCP to sign multi-product deals with OEMs* in exchange for high value, multi-year cloud commitments (e.g., Ford's six-year deal with GCP, Android Auto, Play, and Maps). Google is also aggressively targeting manufacturing and supply chain, offering factory transformation with no cost until P&L measured improvements, at which point their cloud revenue begins.

Amazon and Google are both making moves to become direct participants in high value segments of the Auto & Mobility space, and competing directly with industry participants, which *limits their credibility as an unbiased ecosystem enabler, providing an opening to Microsoft as a neutral ecosystem partner*. Google is playing heavily in autonomous solutions and mobility as a service, through its 1P leading AV developer Waymo. Amazon is primarily focused on investments that enhance its 1P retail and logistics business. Both have been more active investors than Microsoft, who has refrained from direct acquisitions but invested in some notable companies.

5. APPROACH TO ACHIEVE OUR AMBITION

Our strategic posture builds on our openness and strengths as a hyperscale cloud provider with an industry cloud approach

Our goal is to be the cross-ecosystem cloud and end-to-end technology partner of choice. Our strategic posture is to differentiate from competitors by a steadfast positioning as a *neutral enabler of our customers* and refrain from 1P plays which threaten our customers' value chains (e.g., no 1P OS, logistics businesses). We will leverage our

[7] AMT triangulated analysis
[8] Arm technologies to transform the software-defined future for auto (Sept 2021)
[9] AMT triangulated analysis

comprehensive, end-to-end cloud capabilities, alongside our vibrant ecosystem of partners, to help our Auto & Mobility customers drive the critical digital transformation required to thrive in a CASE environment, while looking for opportunities to help shape and facilitate an emerging fleet service value chain. We will provide our customers the enterprise grade security to ensure the connected vehicles of today and autonomous vehicles of tomorrow are digitally protected, and enable them to navigate the complex data sovereignty regulations that are top of mind for the industry. Across customers, we will continue our ongoing work to systematically *become part of the "Digital COGS" in their core areas* where we have a strong right to win.

Our ambition is to grow our current Auto & Mobility business from $2.8B FY21 to $10B+ by FY26 and we have a three-pronged approach to achieving it that is consistent with our strategic posture:

1) **Sell more of what's on the truck:** In our existing strongholds of core Auto, we will continue to provide the tools for key players to manage the industry evolution and become more productive, expanding from our stronghold in Enterprise into their core business domains (Operations, Product, Customer). We will make it easier for our customers to adopt our solutions and drive baseline revenue from $2.8B to $8.0B in FY26.
2) **Build a differentiated position with the SDV Open Ecosystem**: We will leverage the most significant vehicle electronic and electric (EE) architecture transformation in history to enable an open-source approach (SDV Open Ecosystem) and build the toolchain for SDVs with critical tools and technologies (i.e., GitHub, Azure services). This toolchain enables OEMs, Tier 1s, and service and mobility ecosystem partners to develop a operationalize auto-grade software in and around the vehicle. Estimated SDV revenue of $2.5B by FY26.
3) **Establish a new category of mobility solutions:** We will actively encourage and shape the emergence of the new mobility-led value chain by providing the shared, open platform and building specific solutions to address the needs of new mobility and fleet providers, new entrant OEMs, and AV providers. We estimate this new TAM at $60-90B in FY26 and we are considering opportunities to capture this value.

6. TOP STRATEGIC INITIATIVES

6.1 Grow share with existing products and customers (estimated +$5.2B by FY26) *(Grow share of wallet in existing TAM)*

Our greatest opportunity today is in selling our existing products to Auto & Mobility customers who need these solutions to become more productive and navigate the ongoing evolution in their business, from the factory to the customer.

Enterprise Functions consists of the productivity suite that forms the core of our business today, but we need to accelerate growth with a focus on Front Line Worker, and we need to meet the increasing threat posed by Google Workspace. In the *Customer* domain, we focus on the digital marketing and customer experience solutions that OEMs and Tier 1s need to enable their new direct sales models and navigate ongoing changes to end-to-end customer experience (across digital advertising, sales, and service). In FY22 we will increase our focus through a dedicated Customer Experience Solutions lead to build reference architectures and scale our GISVs. In *Operations*, our solutions including Connected Factory, supply chain integration, digital twin, control tower operations are a primary focus for OEMs, and these operations form their main concern as they grapple with sustainability challenges. In FY22 we are focused on building our work with ZF in Connected Factory to scale to other OEMs and Tier 1s, and we will seek to co-innovate with customers on Sustainability solutions. In *Products and Services*, to address the opportunity created by connected and autonomous vehicles, we will bring MCVP and MADP to market with our initial customers in FY22, focus on bringing high value workloads to Azure and establish a modern PLM ecosystem with our partners.

These differentiated products and solutions represent an estimated +$5.2B in FY26 revenue, but we cannot achieve these goals without an influx of support and higher prioritization with key stakeholders. The size of the Auto & Mobility opportunity demands that we ensure have the resources required to win, and Microsoft should focus on the following priorities:

- Prioritize within DTP for entity extension of the current CDM for Automotive to include Operations, Vehicles, and Fleet (DTP PM, SA, and budget). Develop a reference architecture for a fleet management platform using Dynamics 365 (DTP PM and SA) *[Owner: DTP]*
- Provide GPS support to expand the global AMT ISV portfolio from 11 to 24 partners across Products & Services (19), Customer (4), and Operations (1, in addition to manufacturing industry global ISVs); and establish designated focus for AMT for 6 GSIs. *[Owner: GPS]*
- Leverage the upcoming CES as a platform to drive our FY22 business, and our ecosystem strategy with CV, AD and SDV. In addition, dedicate Product Marketing support to work alongside Industry Marketing and Industry Solutions in developing published industry-targeted product assets and published customer evidence for field sellers and partners for each Auto & Mobility IPS [*Owner: Industry Marketing / Product Marketing]*
- Establish new sales approaches and processes for our most important opportunities and to win high growth new customers. First, we need a streamlined POC funding model for strategic, highly competitive opportunities. Secondly, we need to establish an ATU to strategically cultivate and manage new, fast growth customers (e.g., new OEMs, AV developers, shared mobility providers) and pursue their end-to-end opportunities including the full Microsoft cloud (Azure, MW, D365), coordinating across relevant stakeholders including Industry Solutions, Engineering, and GPS. *[Owner: Sales + Industry Solutions]*

Domain	Offerings	Our Approach	GTM Motion	Support Required	Win Examples	Pipeline Examples
Enterprise Functions *~$1.7B incremental FY26 revenue (13% 5-year CAGR)*	**Organizational Productivity**	• Build on core productivity business by scaling with FLW • Bring Teams into the vehicle • Develop approach to competing with Google	Azure, M365, Power Platform accenture SAP Capgemini	• **Marketing:** Support for industry-specific sales assets, incl. FLW and Google compete	Ford DAIMLER VW STELLANTIS	TOYOTA SAIC
Customer *~$0.6B incremental FY26 revenue (30% 5-year CAGR)*	**Customer Experience & Digital Marketing**	• Support OEMs with CX priorities (e.g., digital marketing, customer journey, retail back-office systems) • Build on momentum with lighthouse customers (BMW, Toyota) and partners (Adobe, Annata) • Develop reference architectures for priority customer scenarios	Azure, CI, D365 annata Adobe WPP accenture Hitachi Solutions	• **ENG:** Prioritize AMT in DTP for D365 • **BD:** Invest in 2 scale ISVs (1 in progress) • **GPS:** Develop 2 additional scale ISVs (3 total, incl. Annata), 2 global SIs (Accenture, Hitachi) • **Marketing:** Develop collateral for reference scenarios & 3 customer stories	TOYOTA DAIMLER	VW GM VOLVO
Operations *~$1.1B incremental FY26 revenue (40% 5-year CAGR)*	**Manufacturing, Supply Chain, & Sustainability solutions**	• Develop repeatable GTM for Connected Factory, scaling the high touch, investment model with ZF • Develop end-to-end manufacturing architecture • Develop packaged POC offerings • Co-innovate with three AMT S500 customers with Sustainability Cloud	Azure BlueYonder ptc Rockwell Automation pwc accenture	• **ENG:** End to end, modular customer demo • **Sales:** Establish streamlined POC funding model for strategic, competitive opportunities, incl. packaged delivery and pre-committed funding • **Sales:** Subsidiary Industry PODs for US, EMEA, India • **GPS:** Support industry GTM for 3 SIs (incl. PWC, Accenture) • **Marketing:** Develop collateral for reference scenarios & 3 customer stories	ZF	TOYOTA STELLANTIS GM DAIMLER SCHAEFFLER BMW
Products & Services *~$1.9B incremental FY26 revenue (50% 5-year CAGR)*	**Connected & Autonomous Vehicles, New Market Entrants**	• Support customer priorities for MCVP, MADP and Azure • Develop reference architectures for priority customer scenarios • Drive ecosystem strategy • Support engagement of 'must-win' partners, new market entrants	Azure, MCVP, MADP cognata dSPACE Elektrobit ERICSSON accenture DXC KPIT	• **ENG:** Release MCVP and MADP in FY22; Demos • **GPS:** Support additional 4 CV and 5 AD partners • **GPS:** Support industry GTM with 6 SIs (incl. Accenture, KPIT, DXC) • **Sales:** Establish an ATU to cultivate and manage new mobility market entrants, across full Microsoft cloud (Azure, MW, D365) • **Marketing:** Develop collateral for reference scenarios & 3 customer stories	VW RENAULT NISSAN GM cruise BOSCH	TOYOTA Ford APTIV FOXCONN
	Digital Engineering, HPC, PLM, Dev/ML Ops	• Win OEMs' digital engineering workloads • Develop reference architectures • Build PLM ecosystem	Azure, GitHub/ADO Ansys DASSAULT SYSTEMES accenture DXC KPIT	• **Marketing:** Support for 3 customer stories	ZF BOSCH	BMW
	Industry Data Models	• Develop industry data models to help customers address fragmented data, drive transformation projects & standards, and digital feedback loops • Build on success of v1 of CDM for Automotive (FY20) • Develop reference architectures for top customer Data and AI scenarios per IPS • Develop solution plans for Fleet and Data Monetization	Azure, CDM, CI annata ERICSSON wejo WAYVE BlueYonder accenture pwc	• **ENG:** Prioritize AMT with DTP, to build models for Customer, Operations, Vehicles & Fleet • **ENG:** Design assessment of fleet and data monetization solutions • **ENG:** Support 3 ISV and 3 strategic customer/consortia projects in FY22 • **Marketing:** Develop 3 customer stories	TOYOTA	VW GM RENAULT NISSAN VOLVO

The table above summarizes the Auto & Mobility initiatives and requirements, organized according to our high-level prioritization. See Appendix A for a detailed breakdown of the opportunity, execution plans, and resourcing requirements for these near-term initiatives.

6.2 Ignite the Software Defined Vehicles Open Ecosystem in the next six months. (Estimated +$2.5B by FY26) *(Capture net new areas of TAM)*

Software is transforming car capabilities but also creating development challenges for automotive players. The latest automotive innovations depend less on mechanical ingenuity than on software quality, execution, and integration. This change is occurring rapidly, and automotive OEMs and other industry stakeholders are struggling to keep pace. An end-to-end approach that integrates independent software elements into a comprehensive platform would improve functionality and decrease complexity for the industry. However, OEMs fear becoming commoditized (the "Foxconn of auto") and are therefore resistant to accepting a 3P standard from a Tier 1 or Google, and instead are attempting to go it alone, building their own OS and software features. But these OEMs are struggling as they lack the critical software components and required sophisticated tool chain standards, key to the development of differentiating applications (e.g., AD algorithms, IVI or mobility services) and connectivity to the cloud, to succeed.

Microsoft can help. We have an entire tool chain (with programming models, GitHub as the development platform, Visual Studio Code, Developer Collaboration through Teams, Azure) and can enable a global SDV Open Ecosystem using the Eclipse Foundation. This would be game changing for the industry, providing access to both a toolchain and leading open source software components while still allowing OEMs to retain their flexibility and ability to share without dependency on a single vendor. This approach will position Microsoft as the partner of choice for the entire mobility ecosystem and would systematically drive business towards Azure and GitHub.

Based on an already approved investment, Microsoft is currently working with our initial partner, Bosch, to develop the MVP for an open source in-car stack consisting of a container execution environment and a middle layer to establish communication between vehicle functions and cloud. This will be delivered by December and we believe and this initial work will enable us to win at least one major OEM (most likely BMW, JLR or VW) by March 2022 to have them endorse the open-source ecosystem for their in-car software development.

To further drive adoption by customers, we are engaging in conversations with additional attractive partners to join the SDV Open Ecosystem (e.g., ZF, Aptiv, KPIT, Qualcomm, TTTech, EPAM and Accenture). Igniting the partner ecosystem will entice a range of further OEMs to join SDV (e.g., Stellantis, Toyota, Mercedes, GM, Ford or Volvo Trucks). *This would drive an incremental $2.5B ACR by FY26 to Azure from OEMs, while also positioning Microsoft as the preferred cloud for any kind of future mobility services from both OEMs and mobility platforms.* The approach would be attractive even to OEMs who already use Google for in-car development (such as Ford) and as such would enable us to leapfrog the competition. An additional boost could be created by establishing "GitHub Automotive" (with its own incremental business case) and an Edge Compute Fabric (3P through a partner such as Suse).

Our OEM customers need help today, and with *AWS already investing in a SDV equivalent through partnerships with Arm* and other industry partners, we must act quickly to win the market by making a well-orchestrated move towards OEMs, partners, and external marketing. We believe Microsoft should prioritize the following actions:

- Recruit OEMs via a CEO-to-CEO engagement model, starting with the German OEMs (BMW, VW, Mercedes-Benz), inviting them to engage in the SDV Open Ecosystem and help to define the automotive OS each one is working on individually *[Owner: AMT to propose engagement plan]*
- Engage Accenture/CEO to join the SDV open ecosystem as a technology and global service partner. Accenture has valuable assets developed by its car software specialist ESR Labs that could accelerate SDV *[Owner: AMT to create proposal]*
- Leverage the upcoming CES as a launch/marketing platform to amplify the SDV effort and help engage industry players to join us in this open ecosystem *[Owner: Industry and Product Marketing]*
- Support initiatives such as "GitHub for Automotive", which would further enhance footprint and visibility of our tool chain *[Owner: GitHub]*
- Finally, as we scale in all these areas, identify gaps and address further needs via requests to leadership / SLT *[Owner: AMT, Engineering]*

See Appendix B for a detailed description of the SDV opportunity

6.3 Shape the emergence of the new mobility-led value chain *(Create New TAM)*

Microsoft can help create and shape a new value chain centered on mobility services. This emergent mobility-led value chain will be tech intensive (e.g., high quality, sticky cloud workloads from connected and autonomous fleets, edge data collection from fleets), fast growing, and will require not yet established systems (including the SDV Open Ecosystem) to extensively coordinate and operate across the value chain. We believe opportunities across this new value chain will collectively create an additional $60-90B of Core TAM by FY26.

The emergence of the value chain creates a "jump-ball" situation in which Microsoft can win significant share. However, while this value chain is still nascent, the winners of tomorrow are being formed today and it is imperative that Microsoft acts quickly to capture this opportunity. While additional research is needed to fully articulate and define our long-term initiatives, we have the following hypotheses for how to compete in the space:

Establish a new category of mobility solutions: Establish a plug & play mobility platform that enables collaboration and coordination across the value chain, from physical vehicle design to operations, to integration into broader transport networks. This platform would leverage CDM as a data-sharing enabler, leveraging the momentum of the SDV open ecosystem, and our ISV ecosystem to extend capabilities. Solutions might include *Data-sharing & Monetization, Fleet Intelligence Systems, Foundational Mobility Solutions* (e.g., tracking, federation as part of a larger transportation system), *Purpose Built Fleet Vehicle Design & Testing,* and *Autonomous Capabilities Development and Integration* (e.g., leveraging our IP from MCVP and MADP products). We are already building a POC with FedEx to capture and monetize streetside imagery generated by their fleet of delivery trucks that collectively drive >18M annually. Going forward, Microsoft should create multiple pilots with mobility players across varied segments to understand the needs of enterprise fleets, and identify required platform and ecosystem capabilities.

Build and connect the ecosystem of new value chain players: Microsoft should forge partnerships among leading, innovative mobility players, to shape the development of the new value chain and to position Azure at the center of the ecosystem. In FY21 we invested in Cruise to bring its premium workloads to Azure, and we made introductions to connect greenfield OEM Arrival with autonomous developer Wayve to open the door to potential partnership. Building on new ATU momentum, Microsoft should systematically identify leading mobility companies and review opportunities to attract them to Azure (including making strategic investments as warranted) and seek opportunities to foster additional connection between key players. Examples of key players identified that we need to attract to Azure include Nuro, Argo.ai, Lucid Motors, Gatik.ai and Helm.ai. Key players we need to drive increased cloud penetration with include Wayve and Arrival and exploratory discussions are underway via BDSV and the AMT team.

7. AREAS FOR DISCUSSION

- Overall Auto & Mobility opportunity, strategic posture, and priority initiatives
- Asks to the SLT:
    - Support for the near-term initiatives that will allow us to win in Auto & Mobility, including prioritization from DTP, GPS, and Product Marketing
    - Overall support to ignite the SDV Open Ecosystem around a first client endorsement and additional partners:
        - Initiatives such as "GitHub for Automotive", which would further enhance footprint and visibility of our tool chain
        - Ask to Accenture/Julie Sweet to join the SDV Open Ecosystem as technology partner (including convert to an open-source approach) and global service partner
        - Create a concerted and visible marketing event at CES in January around its presence in Automotive and Mobility.
        - A concerted drive led by Satya with the CEOs of the leading OEMs starting with the German OEMs (BMW, VW, Mercedes) to engage in the open ecosystem and help to define the automotive OS each one is working on separately.

APPENDIX

A. DETAIL 6.1 GROW SHARE WITH EXISTING PRODUCTS AND CUSTOMERS (estimated +$5.2B by FY26)
Opportunity, execution plans and resourcing requirements

Enterprise Functions: *~$1.7B incremental FY26 revenue (13% 5-year CAGR)*

Organizational Productivity. We have strong performance today in Modern Work (MW), and we are growing through a focus on Front Line Worker (FLW), low-code development, and IT modernization. We have recent wins with key OEM customers (e.g., VW: 400K users licensed for Power Platform; Daimler & Toyota: HoloLens 2 and D365 Remote Assist), but are facing new competitive challenges from Google, who is targeting MW at our S500 customers (Stellantis, Toyota). After our recent MW win with Stellantis, we received feedback that we are not telling a compelling, differentiated story, but we won on price.

AMT actions: Industry Solutions (IS) will designate a solution leader lead Organizational Productivity, including support of industry assets for MW, low-code development, and IT modernization.

Other support: To build on our core strength in Enterprise Functions requires MW product marketing to prioritize developing industry-specific sales assets, especially for FLW growth and Google compete.

Customers*: ~$0.6B incremental FY26 revenue (30% 5-year CAGR)*

We are working with Auto & Mobility customers to enable their new direct sales models and navigate ongoing changes to end-to-end customer experience in digital advertising, sales, and service. Our 1P and 3P offerings include customer data platform, digital marketing, customer journey for sales & service, and retail back-office systems, and this is the strongest opportunity for FY22 and FY23 growth in D365 revenue. We have strong market demand, lighthouse wins with S500 customers (BMW, Toyota), a core set of global ISVs (Adobe, Annata), Global Black Belt (GBB) alignment, and need to scale our partner ecosystem and GTM.

AMT actions: IS will add a solution leader to drive the Customer Experience IPS, with a focus on developing reference architectures for the top three customer scenarios in our FY22 pipeline.

Other support: To grow our Customer Experience work with Auto & Mobility customers, we need prioritization for AMT from DTP engineering for D365; Investment in one scale ISV (Annata – work in progress with BD); Global Partner Solutions (GPS) support to develop 2 additional scale ISVs (4 total, including Annata, Tekion) and 2 global SIs (Accenture, Hitachi); and marketing support for three published customer stories and digital collateral for the three reference architecture scenarios.

Operations*: ~$1.1B incremental FY26 revenue (40% 5-year CAGR)*

We are working with OEMs and Tier 1 suppliers in manufacturing and supply chain to create efficiencies, improve visibility and reduce costs across factories, supply chains, and operations. Our 1P and 3P solutions span across connected factory, supply chain integration, digital twin, control tower operations, and this is the primary way we engage Auto & Mobility customers with Sustainability Cloud. We have a referenceable win with an S500 customer (ZF), a core set of ISVs (e.g., Blue Yonder) and SIs (e.g., PWC), and GBB alignment. To capture market share, we need to significantly scale our GTM velocity, via the following actions:

AMT actions: IS will develop an end-to-end manufacturing architecture (completing work started by Customer Innovation and Commercial Software Engineering), develop packaged POC offerings, and will co-innovate with three AMT S500 customers with our Sustainability Cloud.

Other support: For Microsoft win in Auto & Mobility Operations requires new Sales approaches and processes, as well as increased marketing support. Establish a streamlined Digital Win Room (DWR) processes for strategic, highly competitive opportunities (i.e., ZF). Establish a FY22 campaign to drive POCs with packaged delivery and pre-committed funding; regional sales leadership to dedicate sales resources starting in FY22 with two domain experts and two Technical SMEs per region, followed by two formal 'PODs' per region in FY23 comprised of one domain expert and

three architects per POD. Marketing to deliver three published customer stories and digital collateral for the reference architecture.

***Products & Services**: ~$1.9B incremental FY26 revenue (50% 5-year CAGR)*

Connected and Autonomous Vehicles
Our GTM plan for Connected and Autonomous Vehicles has two dimensions, the first of which is winning OEMs and their partners via 1P PaaS investments in the Microsoft Connected Vehicle Platform (MCVP) and the Microsoft Autonomous Development Platform (MADP). MCVP is a platform that establishes the flow of telemetry from the car to the cloud, allows OEMs to send over the air (OTA) updates to connected vehicles, enabling different vehicle functionality, provide updates, and deliver value-added services; it is initially focused on Renault-Nissan and VW. MADP is an end-to-end platform that customers can use to develop and deploy autonomous driving functions (e.g., automated highway driving, emergency braking, traffic jam pilot, adapted cruise control) to achieve L2-L5 autonomous solutions, and is initially focused on VW. Both MCVP and MADP are substantial pillars of our long-term industry strategy to enable digital feedback loops (e.g., MCVP is a building block for SDV, MADP is a key differentiator for AV developers, who offer premium tier 1 Azure workloads, and utilizes the full MS cloud including Purview for data governance, Synapse for analytics, and AML for AI.)

Secondly, our GTM plan centers on securing the Microsoft cloud in the overall Auto & Mobility ecosystem by winning Azure platform commitments with OEMs, Tier-1s and new market entrants with alternative platform strategies. In line with this effort, we have secured key OEMs on Azure-only including Cruise (GM) and Daimler, as well as new market entrants (Wayve), and we will continue selling to highly targets efforts with strategic partners and new market entrants.

AMT actions: IS will support the customer priorities for MCVP, MADP and Azure, design the overall ecosystem strategy, support engagements with 'must-win' partners and new market entrants, and develop supporting assets including reference architectures for key customer scenarios.

Other support: To deliver with our initial customers (Renault-Nissan and VW), we need MCVP and MADP to release in FY22. We also need GPS to provide global ISV coverage for 9 additional CV and AD partners for (16 total – including Cognata, Scale AI, Helm.ai, aiMotive) and support Auto & Mobility-specific GTM with 6 SIs (including Accenture, KPIT, DXC). Finally, we need Product and Industry Marketing to develop collateral for reference scenarios and at least three customer stories.

Digital Engineering, High Performance Compute (HPC) & Product Lifecycle Management (PLM)
We are working with OEMs and Tier-1s on critical digital engineering workloads, including HPC, Dev/ML Ops and Digital Twins. In HPC we have recent growth with customers including BMW, Honda, & Toyota (all with ACR >$1M). We also have strong market demand for Dev/ML ops, both in product engineering (ZF) and in enterprise IT. In FY22 we will consolidate these areas into a strategy for PLM, including what we will build or integrate from 1P solutions, as well as building out our partner portfolio of 3P solutions, to create an end-to-end PLM offering.
AMT actions: IS will add a solution leader to drive this area overall, including development of reference architectures for the top customer scenarios in our FY22 pipeline and scale our market for HPC and Dev/ML Ops including working with GPS and key HPC, and PLM partners (e.g., Ansys, Siemens, Autodesk, Bentley)

Other support: Product marketing support for three published customer stories.

Cross-Portfolio Industry Data Models

Industry Data Models are a critical to helping our customers address their highly fragmented data, set the stage for digital feedback loops, accelerate transformation projects, and drive industry standards. We have strong market demand with customers and partners (Toyota, Arrival, Wejo, Annata, NADA/STAR), initial success with V1 of the CDM

for Automotive (July 2019), and opportunities to expand models strategically (Connected Vehicle, Fleet) – but have not been prioritized in DTP in FY21 or FY22.

AMT actions: IS will develop reference architectures for the top customer Data and AI scenarios per IPS in our FY22 pipeline.

Other support: To win in Auto & Mobility, Microsoft should build on our initial success in CDM for Automotive but prioritizing AMT with DTP engineering, for a minimum of one PM, one SA, and dev budget to prioritize, define and build next wave of models for Customer, Operations, Vehicles & Fleet. We also need a design assessment of fleet and data monetization solutions in Q2, and support for three ISV and three strategic customer/consortia projects in FY22.

Account Team Unit (ATU) for Mobility & Transportation New Market Entrants

The influx of new market entrants in mobility, autonomy, EVs, transportation and data promise to bring substantial growth to the market and high value cloud computing workloads. However, these startups and potential unicorns default into Small, Medium, Corporate (SMC) sales, and this scaled service model opens the door to cloud competitors who are prioritizing these innovative entrants. We have had lighthouse wins in this segment (e.g., Arrival, Wayve, Wejo, Tekion, Fisker, Nikola), but in each case we close these deals through by establishing one-off v-teams, which limits repeatability and our ability to scale. To capture this market opportunity, we need the following:

AMT actions: IS will establish a prioritized list of new entrant targets, and a process to continually identify our highest priorities in the segment. We will define standard engagement processes to develop and strategically support these pursuits.

Other support: An ATU must be established to strategically cultivate and manage these new customers, pursue their end-to-end opportunities including the full Microsoft cloud (Azure, MW, D365), and integrate IS, engineering, GPS and other teams as needed.

B. DETAIL ON 6.2 IGNITE THE SOFTWARE DEFINED VEHICLES OPEN ECOSYSTEM IN THE NEXT SIX MONTHS. (ESTIMATED +$2.5B BY FY26)

Software-defined vehicle – the play for the future of mobility

Software is transforming car capabilities but also creating development challenges for automotive players. An end-to-end approach that integrates independent software elements into a comprehensive platform is needed to improve functionality and decrease complexity. This comprehensive effort is commonly referred to as “software defined vehicle” or SDV for short.

Today’s hardware-defined cars are rapidly transforming into software-defined transportation platforms. The latest automotive innovations, including intuitive infotainment, self-driving abilities, and electrification, depend less on mechanical ingenuity than on software quality, execution, and integration. This change is happening so rapidly that automotive OEMs and other industry stakeholders are now struggling to keep pace. The enormous cost of integrating and upgrading the features that consumers increasingly expect, including high-end onboard assistants and advanced driver-assistance systems (ADAS), is also daunting.

McKinsey provided a great overview of the challenges and opportunities for the automotive industry in this report: The case for an automotive software platform | McKinsey that is highly informative and right on the money until they reach the conclusion part where they are essentially betting that a few technology players will swoop in to rescue the auto OEM’s. McKinsey is speculating that either AWS or Google from their respective strengths in the IVI space (GAS – Google automotive services or Amazon Alexa) will expand to cover the entire space. The risk is certainly there, especially with AWS driving alliances with companies such as Elektrobit (Continental’s automotive technology company), Blackberry who owns QNX (a very popular IVI and realtime OS), and others. However, the market is

extremely fragmented and fear of vendor lock-in, and the requirement of providing a strong, US-independent China strategy, especially for the German autoall OEM's whose business is by now largely dependent upon China, continues to offer opportunities for Microsoft to win this space with a differentiated strategy aiming at driving the next generation software-defined transportation efforts to the Microsoft cloud.

The prize winning in this space is certainly worth our efforts - the global automotive software market size is projected to grow from USD 16.9 billion in 2020 to USD 37.0 billion by 2025, at a CAGR of 16.9%1. The global automotive software industry is rapidly growing, and with the gained traction of connected and autonomous vehicle technologies, the automotive embedded software has become a key area for innovation. The increasing number of advanced services provided in connected cars is attributing to the growth of automotive software for connected services. These services through cloud platforms allow drivers, carriers, shippers, fleet operators, dealers, service stations, insurance companies, and other authorities to be connected in real-time with each other. We are well positioned with existing assets such as Azure Mobility Services and D365 capabilities to be a key player in this market.

However, to tap into this market and drive the leverage for our existing assets, we must be part of the rapidly forming SDV eco system participating, defining, and driving de-facto standards that bring together the suppliers and automotive OEM's and include new, digital-native players that are rapidly emerging in spaces such as autonomous driving. Our partnerships with Bosch, Cruise, and others form the foundation for these efforts along several critical dimensions:

- Create an open-source eco system for in-car innovation. This effort is a key part of our work with Bosch and focuses on the three areas described below. The goal is to announce an Eclipse Foundation special interest group for SDV at the end of October with Bosch/ETAS, EPAM, and others. Using open source will alleviate the vendor lock-in fears but provide us the platform to define and drive the standards ultimately driving traffic to the Microsoft Cloud and our services.
    - Establish a collaborative engineering platform that brings together the mobility eco system. Together with Bosch and the GitHub team, we are extending the GitHub platform (using existing extension points) to support the stringent security and safety requirements of the automotive industry and enable the integration of critical elements such as embedded software development toolchains from companies such as ETAS (in-progress) or TTTech (under discussion). This effort is tentatively labeled "GitHub for automotive" and could serve as a blueprint for other industries with stringent regulatory requirements.
    - Define an in-car programming model and provide an open-source runtime that is cloud-aligned as much as possible centered on a vehicle (digital) twin platform based upon our DTDL specification and compatible with Azure Digital Twins. The goal is to enable developers who are used to cloud technologies to quickly be able to write in-car software reliably and without worrying about car models, manufacturers, or specific car technologies such as Autosar and yet be able to interact across in-car solution domains (from ADAS to powertrain to IVI) and with the car itself.
    - Design and develop a common in-car control plane based upon industry standards such as the Kubernetes API to simplify managing the complex in-car software landscape from embedded systems to hypervisors to multiple operating systems.
- Seamlessly integrate Azure services into the open eco system capabilities to provide telemetry (data ingest and analytics), management, security, and function development services on the Microsoft Cloud. We will use our Azure Mobility services to enable the integration of existing Microsoft cloud capabilities such as Synapse for telemetry intelligence and D365 services for sales, supply-chain, and other business domains relevant for the mobility eco system.
- Empower partners such as Cruise to easily offer their toolchain and their in-car assets to automotive OEM's and encourage the growth of an "AutoTech" industry based upon the model defined in (A) hosted on the Microsoft Cloud.

The combination of Microsoft's entire tool chain (with programming models, GitHub as the development platform, Visual Studio Code, Developer Collaboration through Teams, Azure), the enablement of a global SDV Open Ecosystem by Microsoft using the Eclipse Foundation is not only expected to be the game changer for this industry providing them both access to a tool chain and leading open-source software components still with flexibility, ability to share and no dependency on a single vendor. This will position Microsoft as the partner of choice for the entire mobility ecosystem and systematically drive business towards Azure and GitHub.

Based on an already approved investment and jointly with our initial partner Bosch, MS is currently developing the MVP for an open source in-car stack establish communication between vehicle functions and cloud to be delivered by December. We believe that based on this we will be able to win at least one major OEM, most likely BMW, JLR or VW, by March 2022 to endorse the open-source ecosystem for its in-car software development.

In addition, we are in conversations with several further potentially attractive partners (e.g., ZF, Aptiv, Qualcomm, TTTech, EPAM and Accenture) to join the SDV Open Ecosystem, which are expected to further enhance adoption rate by customers. We expect that in case of a successful ignition of the ecosystem a range of further OEMs (e.g., Stellantis, Toyota, Mercedes, GM, Ford, or Volvo Trucks) would join.

This would not only enable $2.5B ACR by 2026 directly from the OEMs, but also position Microsoft Cloud as the preferred cloud for any kind of mobility services provided by both OEMs and mobility platforms. As the approach would even be attractive to OEMs using Google widely for in car developments such as Ford, it would enable MS to leapfrog the competition. We believe the time is now to claim the market and make a well-orchestrated move towards OEMs, partners, and external marketing.

Exhibit B1 SDV Open Ecosystem Opporunity Sizing

C. DETAIL ON EMERGING MOBILITY VALUE CHAIN

Exhibit C1 Illustrative View of Emerging Mobility-Led Value Chain

D. SUPPORTING TREND, CURRENT CONTEXT AND SUPPORTING PARTNER ANALYSIS

Exhibit D1: FY21 Revenue by Customer Segment

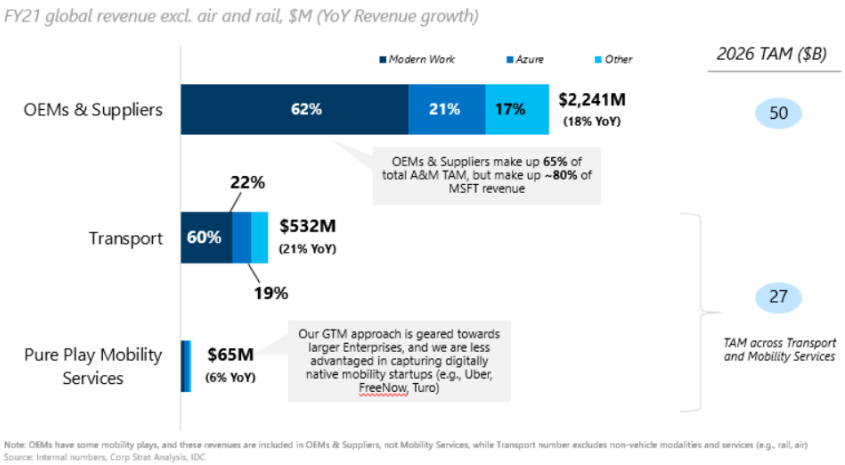


Exhibit D2: FY21 Azure AM Revenue by area

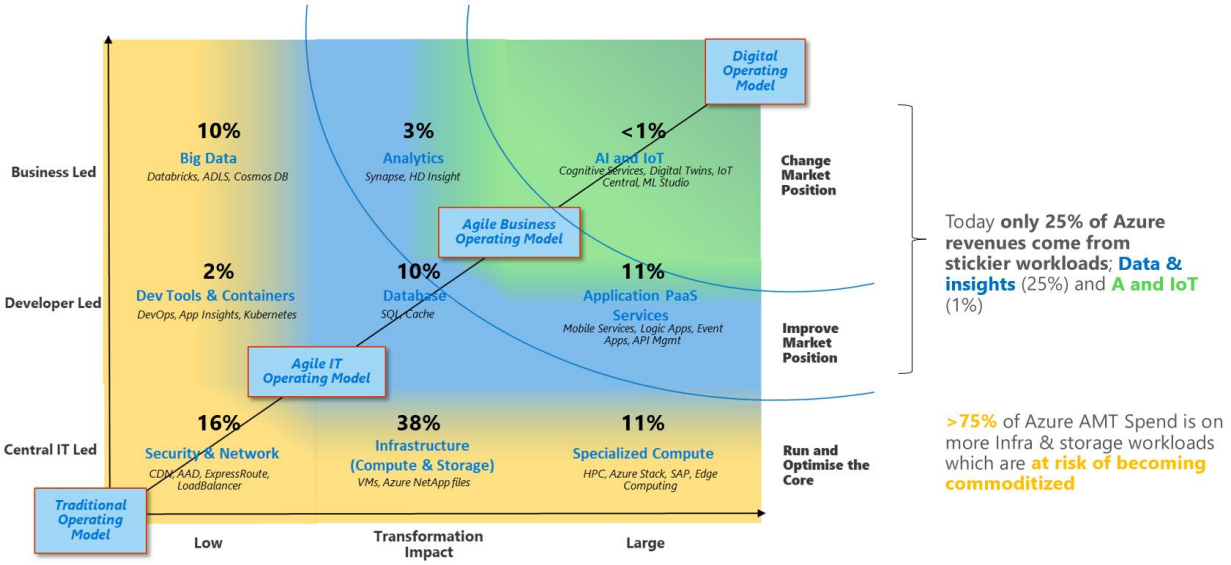


Exhibit D3: Status by Industry Priority Scenario

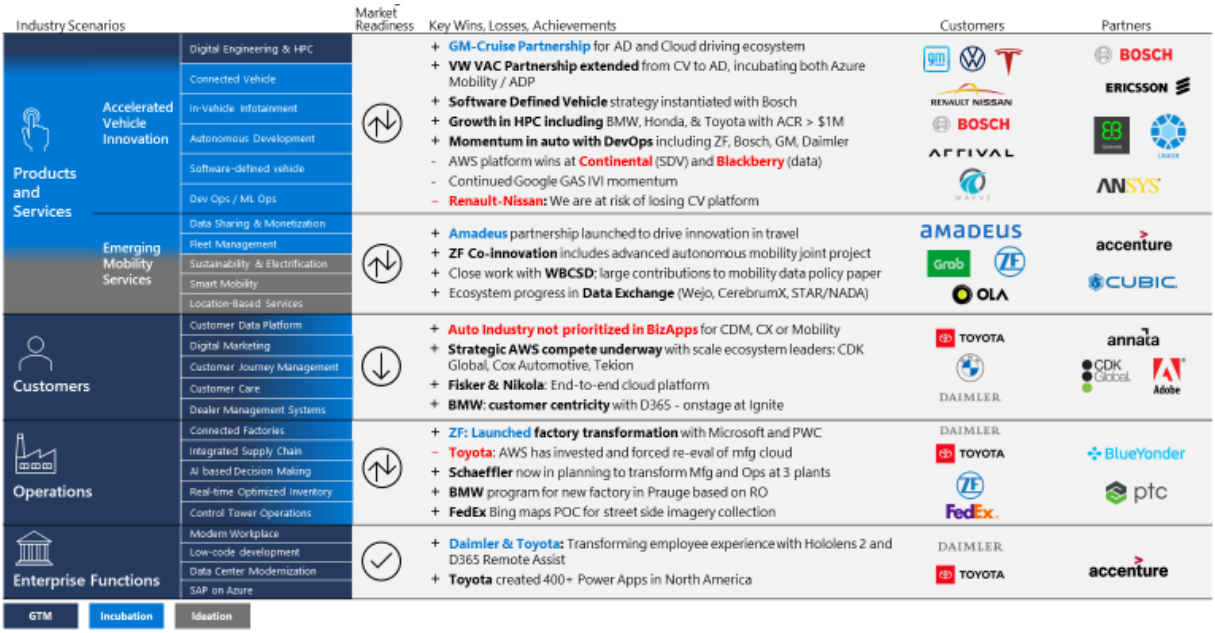


Exhibit D4: AMT Ecosystem Taxonomy

Taxonomy		Incumbents	New Entrants
Auto	OEMs	VW, Toyota, Ford, Daimler, GM, Stellantis, BMW, Hyundai/Kia, Renault-Nissan, SAIC	Tesla, Nio, BYOD, Nikola, Arrival, Polestar, Lucid
	Suppliers (Tier X) & Tech Vendors	Bosch, Faurecia, Valeo, ZF, Denso, Magna, Cummins, Conti	NVIDIA, Accenture, KPIT, DXC/Luxoft, Foxconn, Google, Mobileye, Cognata, Applied Intuition, Electrobit
Mobility	Mobility Platforms	Enterprise, Hertz, Avis, Taxi, Public Transportation	Uber, OLA, Lyft, FreeNow, Didi, Maven, Moia, Zoox
	Autonomous Developers	N/A	Waymo, Cruise, Wayve, Argo.AI, Arrival, Nuru, Gatik
Transport & Logistics		DHL, FedEx, UPS, Walmart	Amazon

Note: Examples / not exhaustive

Exhibit D5: AMT Partner Portfolio

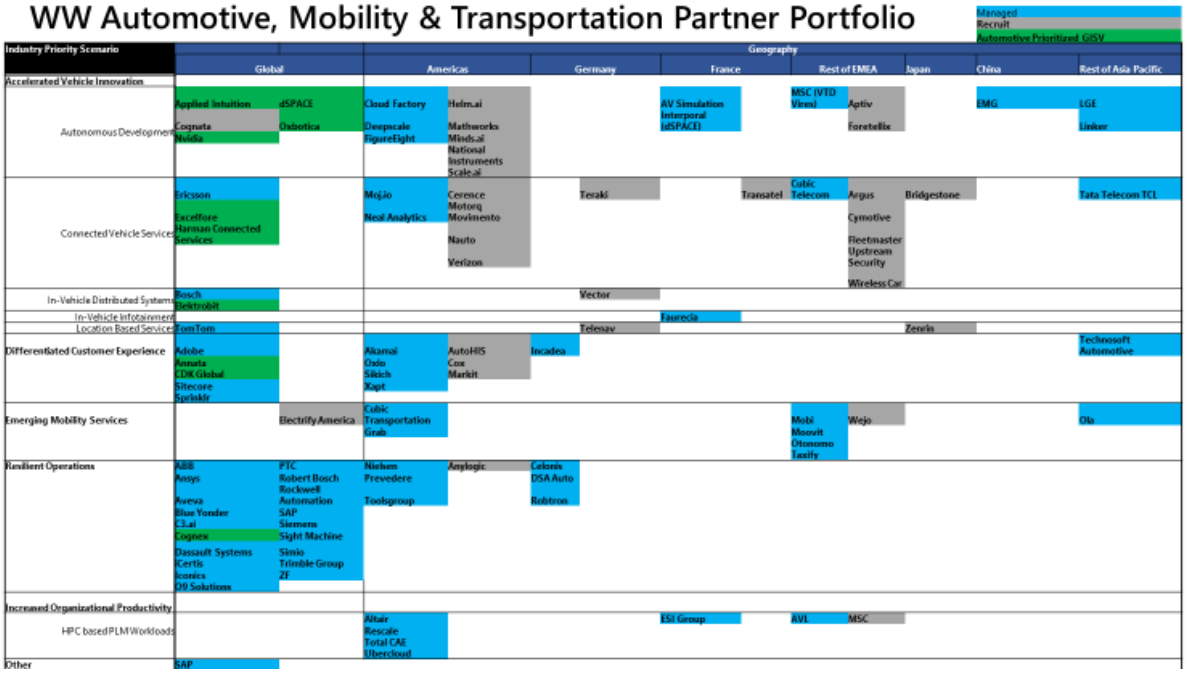


Exhibit D6: GISV and SIs

GISV				SI			
Area	Partner	Sub-Area	Industry	Area	Global Option 1	Global Option 2	IPS-Specific
Products & Services	aiMotive	AD	AMT - Proposed	Products & Services	Accenture Indusry X/ESR/Umlaut	Cap/Altran/Aricent	DXC/Luxoft | KPIT | TCS | 21 Vianet
Products & Services	Applied Intuition	AD	AMT	Customer	Accenture Interative		PWC | Hitachi | EY
Products & Services	Cognata	AD	AMT - Proposed	Operations	Accenture	Cap/Altran	PWC | Hitachi
Products & Services	dSPACE	AD	AMT	Enterprise	Accenture	Cap	
Products & Services	Elektrobit	AD	AMT				
Products & Services	Helm.ai	AD	AMT - Proposed				
Products & Services	Nvidia	AD	AMT				
Products & Services	Oxbotica	AD	AMT				
Products & Services	Scale AI	AD	AMT - Proposed				
Products & Services	Upstream	CV	AMT - Proposed				
Products & Services	Cubic Telecom	CV	AMT - Proposed				
Products & Services	DSA	CV	AMT - Proposed				
Products & Services	Ericsson	CV	Telecom				
Products & Services	Excelfore	CV	AMT				
Products & Services	Harman Connected Services	CV	AMT				
Products & Services	TomTom	CV	AMT - Proposed				
Products & Services	Wayve	AD	AMT - Proposed				
Products & Services	Ansys	HPC	Mfg				
Products & Services	Amadeus	Mobility	AMT				
Products & Services	Arrival	Mobility	AMT - Proposed				
Products & Services	Wejo	Mobility	AMT - Proposed				
Customer	Adobe		Retail				
Customer	Annata		AMT				
Customer	C3.ai		Retail				
Customer	CDK Global		AMT				
Customer	S4 or Publicis/Razorfish or WPP		AMT - Proposed				
Customer	Sitecore		Retail				
Customer	Tekion or Cox		AMT - Proposed				
Operations	Blue Yonder		Mfg				
Operations	Cognex		AMT				
Operations	Dassault Systems		Mfg				
Operations	Iconics		Mfg				
Operations	O9 Solutions		Mfg				
Operations	PTC		Mfg				
Operations	Rockwell Automation		Mfg				
Operations	Siemens		Mfg				
Products & Services	Sight Machine		Mfg				
Enterprise	SAP		Mfg				