



IS YOUR AUTONOMOUS MARKET ENTRY STRATEGY AS MODERN AS YOUR TECHNOLOGY?

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INTRODUCTION

The approach to deliver disruptive hi-tech products in today's dynamic business environment has dramatically changed over the last decade. It is no longer sufficient for companies to rely on traditional product management and engineering capabilities to win in the marketplace. The frontlines of the hi-tech product launch battle are now happening much earlier in the value chain. Today, years before commercial launch, companies are clashing to acquire talent, create customer demand, promote brand awareness, increase enterprise value and raise capital. The development and execution of Pre-Launch Product Mobilization (PLPM[®]) strategies for the burgeoning autonomous industry are just as important as the final product itself. And participating in the annual Consumer Electronics Show (CES) is a key venue to mobilize your autonomous program for long-term strategic and financial success.



CONSUMER ELECTRONICS SHOW (CES)

Autonomous vehicles (AVs) continuously grab headlines and are discussed daily, if not hourly, across major social media platforms. Given their popularity and highly innovative nature, it comes as little surprise of their growing presence at electronic trade shows, especially CES. This is best illustrated by the growth of CES exhibitors: from 3,600+ in 2014 to nearly 4,500 in 2018¹. This can be partially attributed the participation of original equipment manufacturers (OEMs) and Tier 1 suppliers from Detroit, China, Germany, Korea and Japan.

Hi-tech and start-up companies are actively involved as well and are showcasing their driverless capabilities and products at CES. **This combined cross-industry momentum hit an all-time high in 2018, resulting in several global media organizations to proclaim:**



Forbes: “At CES 2018, autonomous vehicles steal the Spotlight.”²

Australian Broadcasting Corp.: “CES 2018: Cars steal the spotlight at the world’s biggest tech show.”³

China Plus: “Self-driving cars steal the show at CES 2018.”⁴

The effect of CES is not bound to Las Vegas or hi-tech trade shows; it is now disrupting other events, most notably the Detroit Auto Show (NAIAS⁵). CES’s vehicle prominence became evident when it forced the longstanding January car event to move to the month of June (starting in 2020) in an attempt to mitigate the loss of OEM exhibitors, media attention and product debuts.^{6,7,8}

Now that CES is the eminent launching-pad for car technology and AVs, future exhibitors must have an executable strategy to stand out at the conference. Using Liberty Advisor Group’s (Liberty) hands-on 2018 CES autonomous experience, this paper outlines what is needed to have a driverless car exhibit that draws attention, generates buzz and provides a return on your substantial trade show investment.

PREPARING FOR CES IS THE SAME AS CORPORATE STRATEGIC PLANNING

Mega trade shows provide companies with a global platform and audience to introduce new products. They are expensive, however, and require a thorough benefits analysis to verify that capital is optimally used. This is why Liberty treats CES participation as a large-scale corporate project and developed a 5-step Project Management Process to ensure autonomous exhibits have a defined strategy that can be operationalized and managed to completion.

Figure 1:
Liberty’s CES Project Management Process



The following sections breakdown each process step to illustrate what is needed to successfully prepare for and execute an autonomous exhibit at CES.



INITIATION

VISION AND STRATEGY:

Given the enormous effort required to deliver a CES exhibit, aspiring exhibitors must define and obtain consensus for their vision and strategic rationale for attending the trade show. If either one is not supported, then it is recommended to postpone CES projects until the basis for attending can be articulated and agreed to.

The following is an example of a client’s long-term autonomous vision and strategy for CES:

- Three years from now our autonomous driving solution (ADS) will have drivers out of the loop, be able to manage any condition, and provide a comfortable stress-free ride.
- **Our strategy to deliver this vision involves showcasing our capabilities at CES as follows:**

YEAR 1

- Riders can hail a vehicle that uses our L4 ADS prototype and be transported to one of 5 locations
- These demos will grow awareness of our product and create customer and investor interest in our organization

YEAR 2

- Use the momentum from Year 1 CES to (a) execute a pilot in a top 10 city, and (b) highlight the pilot’s accomplishments at Year 2 CES
- Announce the release of the next generation ADS
- Use the pilot highlights and ADS V2 to identify potential product launch customers

YEAR 3

- Announce the commercialized release of L5 ADS and initial customer(s) who will use the product in their vehicles
- Leverage the commercialized L5 ADS to drive further topline growth

SCOPE:

Exhibitors should articulate what they will do at CES to help deliver their strategy. This establishes their scope and the corresponding parameters of the exhibit. **Scope considerations include:**

In addition to booth(s), will the exhibit offer autonomous demos in vehicles?

- Liberty recommends that exhibitors showcase their technology on the streets of Las Vegas, which is now a common tactic amongst AV players. Failure to do so will impinge on the awareness strategy.

What are the boundaries of the AV demo?

- Exhibitors need to balance their current autonomous capabilities with where they want to operate their demos. Liberty’s client identified key locations that gave them maximum exposure and supported their current ADS.
- It is recommended that autonomous exhibitors don’t overextend and risk missteps as negative media reviews, trending hashtags and user experiences will be detrimental to awareness and the future potential value of the organization.



How will the product stand out during demos?

- AV demos are proliferating which makes it harder to get noticed at CES.
- Autonomous products or solutions that have a credible path to market attract greater attention compared to concepts.
- It is recommended exhibitors outline the commercialization steps that their products or solutions have completed to date and the plan going forward.

Will partnerships be established in conjunction with the demos?

- It is recommended that autonomous exhibitors partner with other solution providers to demonstrate a comprehensive autonomous ecosystem: algorithm to vehicle to connectivity.
- Liberty's client established a partnership which was an integral part of their AV demo and supported their promotional campaign.

ROI:

Tweet volume, use of hashtag(s), and increasing website traffic are important qualitative metrics that depict an effective CES awareness strategy. At that the same time, exhibitors need to determine whether their CES investment is creating value. Liberty recommends using a modified ROI (return on investment) with the following inputs for companies not yet generating profits from their products or solutions: ⁹

Return is calculated by assigning financial value to the following outcomes and summing them (not exhaustive):

- New customer leads or meetings
- New followers
- Positive media articles
- New partnerships
- New customer requirements identified

Total CES expenditures represents the investment. Some important budgetary elements include (not exhaustive):

- Prototype development costs related to AV demos
- AV shipping, maintenance and insurance
- CES conference, advertising and contractor costs
- Promotional events outside of CES
- Travel, lodging and meals
- Marketing and advertising expenditures

The resulting modified ROI equation is: $(\text{Return} / \text{Total CES Investment}) * 100$



CAPABILITY AND CAPACITY:

Participating in CES puts you on a global stage for all to examine. In an era of heightened scrutiny where the smallest mistake or misstep has the propensity to go viral, it's critical to understand if your company has the ability and time to flawlessly execute. Here are several questions potential exhibitors need to ask themselves:

- Have you previously exhibited at CES or other large-scale trade shows, such as IFA Berlin or MWC in Barcelona?
- Have you orchestrated autonomous demos on the streets of Las Vegas? This is not limited to the product; exhibitors need to secure permits, manage fleets, have a feedback mechanism for attendees, have experts on hand to answer questions, etc.
- Do you have enough time to plan for and execute your exhibition strategy? It is not uncommon for companies to start the Plan and Execute phases 6+ months in advance.
- Are key internal resources available to support the CES programs, including at the end of the calendar year giving that CES occurs in early January?

If any of the responses are 'no' or 'limited', then consider outsourcing certain roles and/or functions to event specialists and contractors. Addressing capability and capacity gaps as early as possible enables you to better operationalize your CES program.

EXECUTIVE SPONSORSHIP:

The final component of the Initiation step is formalizing your trade show effort with executive sponsorship and getting their buy-in. This also includes securing commitment from leaders who are AV stakeholders to attend CES. Going through the formality of obtaining the appropriate approvals and sponsorship mitigates risk, prioritizes the CES effort and improves the likelihood of meeting strategic objectives.



PLAN

Exhibitors need to thoroughly plan before “diving headfirst” into execution. We recommend starting with the identification of prioritized business requirements and the desired characteristics of your trade show display. Both of these items need to be considered from the attendee’s viewpoint and confirm that they align with your company’s objectives. However, with a trade show as large as CES, you’ll likely need to segment attendees specific to your company and product to ensure the experience meets their respective needs.

Next, work with your cross-functional team (product, marketing, investor relation, engineering, legal, etc.) to identify the targeted stakeholder groups (media, investors, distributors/buyers, technical/business groups, partners, etc.) that you’ll cater to based on the objectives of your trade show appearance. Additionally, you’ll need to identify an advocate from your organization to represent each stakeholder group.

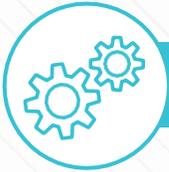


The stakeholder advocates will develop the high-level business requirements in the context of the exhibit's objectives. For example, if one goal is to improve consumer brand awareness then you'll want to pay special attention to the experience of media and buyers/distributors. Will you also be looking for new investors or planning to give existing ones a preview of an upcoming product? If so, you'll want to ensure these VIPs have privacy and a fully compliant experience. Rationalizing the business requirements happens next; to streamline this effort, it is recommended to validate the requirements against your company's business objectives and eliminate any that don't.

Now that the business requirements are documented and agreed to, functional requirements are needed to illustrate what has to be done, how to do it and the level of effort required. To demonstrate how this works, consider the following business requirement: improve how last-mile transportation buyers perceive the safety your autonomous delivery vehicle. One way to achieve this is with a video presentation of safety tests that your product successfully completed/ passed. Another option is to perform the safety tests on a closed outdoor course adjacent to the convention hall that permits observers to be "close to the action". Each approach has trade-offs, such as cost versus the desired level of customer confidence, and they need to be weighed against the intended business outcomes. Another important aspect of functional requirements is location. Depending on how extensive and interactive your autonomous exhibit and demonstrations are, you may require more than one venue – convention hall booth, outdoor exhibition tent, and hotel suite – to ensure the needs of your key stakeholders are met.

Security requirements must be considered as well. Most autonomous technology is leading edge and very tempting to bad actors. Be sure to protect your intellectual capital at trade shows like you would at your corporate office.

The next step is to develop the integrated workplan with an emphasis on cost, staffing and timelines to complete deliverables. It is critical to capture input from advocates and SMEs to ensure the efforts to realize the stakeholder experience are accurately represented. Based on our experience, the workplan will require several iterations due to timing and/or budget overruns. The easiest way to rationalize the plan is by removing business requirements with the lowest priority. Finally, have contingency actions for your workplan. Showcasing the latest driverless technology at the prototype level is inherently risky and may require last minute changes. Additionally, management may modify business objectives given how fast the autonomous market is evolving.



EXECUTION

For the purposes of our execution discussion, we'll assume you've decided to maximize attendee engagement and social media buzz with an AV demo. The implication of this requirement is that the complexity of your effort will dramatically increase. Not only will you need to meet all of the CES rules, but if you venture out onto public roads then additional state and local regulations will need to be followed. Based on Liberty's experience with supporting our client's autonomous road demonstration, here are the key areas that require flawless execution.

RESOURCES:

Mobilizing a CES exhibition team will be challenging. We outlined the importance of ensuring your leadership and key company resources can attend as part of the Initiation step. Before moving forward, you must reconfirm their commitment.

You will immediately be faced with a key decision: which portions of the team should be outsourced? Unless your company is a regular on the convention circuit, you may not have the skills required to flawlessly execute your exhibit's workplan. So how do you decide? Revisit the Capability and Capacity analysis performed during the Initiation step. Any area that you identified as 'no' or 'limited' should be outsourced. Strategic functions and pertinent business roles, e.g., product management and engineering, should be kept in-house.

In Liberty's CES experience, common areas to outsource include:

- Trade show communication and advertising agencies who know what it takes to stand out in the highly competitive and crowded CES environment
- Event specialists to manage CES paperwork and city permits
- Exhibit specialists to design booths and outdoor spaces
- Contractors for exhibit fabrication and tear-down

It is important to note that convention halls mandate certain functions will be provided by them; e.g., equipment moving and food service.

AUTONOMOUS VEHICLE DEMO AREA:

Delivering an autonomous vehicle demo requires you to work with CES to secure outdoor space(s) on convention property. Your business and functional requirements dictate whether the demo takes place on a closed course or public roads, the number of vehicles, and the approximate size of your booth/temporary building. It is also recommended that exhibitors visit the site several months in advance, preferably during a different convention, to get a sense for crowds, street level traffic and the general vicinity. The objective here is to confirm that the proposed demo area will support the desired attendee experience.



APPROVALS:

Conducting driverless demos on public roads will require you to abide by state and local laws, and convention center rules and regulations which includes licensing for vehicles and drivers as well as insurance. The exact route and behavior (e.g., drop-offs) of your demo will dictate which government agencies (Las Vegas, Clark County, etc.) you will need to work with. Nevada has historically welcomed autonomous car technology, but you should engage the appropriate agency(ies) as early as possible to ensure your proposed public road demo is compliant.

INFRASTRUCTURE INSTALLATION:

Due to the tight supply and long lead times of certain autonomous driving components (e.g., V2I ¹⁰ and DSRC ¹¹ equipment) it's important to identify upfront all of the critical parts that your demo requires. Confirm that you have the required inventories or sourcing contracts in place. Otherwise, expedite procurement activities and prioritize efforts to secure regulatory approvals. Finally, if the planned demo route requires traffic signal DSRC infrastructure but it hasn't been installed, increase your workplan's timeline by approximately 1 to 2 months.

MARKETING AND CORPORATE COMMUNICATIONS:

As previously mentioned, the CES environment is highly competitive due to the volume of exhibitors and the presence of MNCs ¹² who are willing to invest heavily in their exhibits and demos. Given this, your CES strategy and workplan must be able to articulate and deliver the exhibit's business requirements and attendee experience so that key influencers will share their positive impressions across their networks. In Liberty's experience, having a dedicated CES marketing team bolsters the likelihood of achieving this objective.

DEVELOPMENT AND TESTING:

To optimize your autonomous demos, additional product development specific to the location, use cases and attendee experience is required. The previously documented functional requirements are an excellent starting point for your engineers. That said, issues will occur and they need to be discovered ASAP. Relocating a portion of the development team to Las Vegas in order to run tests in the city will facilitate the early detection of problems. Your Las Vegas test plan should include functional, environmental and durability tests to ensure the city's characteristics and environment, e.g., sand, traffic patterns, low humidity and infrastructure, will not negatively impact your CES demos.

TRAINING:

In order to successfully exhibit at CES you'll need a cross-functional team comprised of company employees, subcontractors and even specialized consultants. To ensure the attendee experience is carefully curated, each person on your team will need to understand their role and the product(s), and be able to articulate key messages. Should you want to modify the message based on attendee groups (e.g., media, investors, VIPs and general admission) then additional training will be required to manage the complexity. A detailed training plan supported by practice sessions will better prepare your cross-functional team to execute the CES program on day-one.

PRESHOW DRY RUNS:

Your exhibition team will need to get to Las Vegas several days before the start of CES media days to build out the exhibit and demo areas, familiarize themselves with the environment and conduct the final set of dry runs. This will be your last chance to refine and adjust your demo, scripts, role definitions, and potentially reassign people. Its best to conduct as many dry runs as possible with your full team in the exhibition and demo environment.



COMMAND CENTER:

A CES Command Center for your team manages information flow, quickly resolves issues, mitigates risks and improves quality. It should be comprised of cross-functional leads (product, marketing, investor relations, engineering, legal, and other applicable parties) and an overall CES lead. On a nightly basis the Command Center should conduct After Action Review (AAR) to identify lessons learned and disseminate recommended changes for the next day's show.



MONITOR AND CONTROL

To ensure the successful execution of your exhibit, the CES team should use an agile project management office to monitor spend, track progress, manage risks, escalate issues and provide daily status briefings – as with any other corporate project.

MEASURE:

As previously mentioned, CES is a significant commitment in terms of time, staffing and cost.

To ensure the investment is optimally used, metrics are needed to provide a 360-degree view of progress.

Several items to measure include (not exhaustive):

- Budget to actual spend for vendors and contractors, demo development and testing, lodging, meals & travel, and entertainment
- Percent progression to plan for designing, preparing & fabricating the exhibit booth(s) and demo site(s), completing sourcing agreements with vendors and contractors, securing permits, procuring vehicle components, and procuring exhibit paraphernalia
- Time to resolve issues before and during CES, respond to VIP and investor requests and questions, and analyze and share feedback from surveys, twitter, publications, etc.

ISSUE AND RISK MANAGEMENT:

Institute a risks and issues log to:

- Capture all identified problems
- Assign owner(s)
- Explain containment and resolution actions
- Provide weekly status, which includes next steps and requests for help
- List the open, target close and actual close dates
- Monitor progress until closure

All entries need to be ranked based on a system of criticality and severity ratings in order to prioritize risks and issues. Additionally, the highest ranked items are included on status reports until resolved. Liberty recommends that executive sponsors hold a weekly meeting to review the most urgent/top priority risks and issues; approximately two to three months prior to CES, the cadence becomes daily.



CLOSURE

The following actions are recommended to continue the momentum realized during CES:

- Promote positive press received during CES across social media platforms
- Add all new customer leads or key business contacts to your customer relationship management tool and manage based on your original desired CES outcomes
- Send thank you notes to all attendees who registered, and open communications with regular updates on your autonomous program
- Analyze participant feedback from demos to understand the attendee's actual experience and follow-up with select riders who provided strong opinions, both positive and negative, to comprehend the underlying cause of their reactions
- Engage individuals and organizations who tweeted, shared, used hashtag, etc., with regular updates and announcements
- Perform the ROI analysis; regardless of the outcome, determine the underlying causes for successes and misses
- Conduct a detailed project After Action Review to identify lessons learned and what actions should be taken for future trade shows
- Present a comprehensive debrief to executive sponsors
- Make the decision whether to return next year's CES

RESOURCES:

1. CES exhibitor data captured from <https://www.ces.tech>
2. <https://www.forbes.com/sites/sap/2018/01/18/at-ces-2018-autonomous-vehicles-steal-the-spotlight/>
3. <http://www.abc.net.au/news/2018-01-11/cars-took-over-ces-this-year/9318074>
4. <http://chinaplus.cri.cn/photo/world/19/20180110/76356.html>
5. North American International Auto Show (NAIAS) is commonly referred to as the Detroit Auto Show
6. NAIAS, <https://naias.com/press/news/transformational-move-announced-for-the-north-american-international-auto-show/>, accessed 17 August 2018
7. Crain's, "NAIAS touts new mobility event, but exhibitors look to Las Vegas," <https://bit.ly/2PiSdMD>
8. The Detroit News, "BMW follows Mercedes out of Detroit auto show," <https://detne.ws/2PkfD4r>
9. Profit generating companies can use the traditional ROI definition (ROI = Net Profit / Total Investment * 100)
10. Vehicle to Infrastructure
11. Dedicated Short-Range Communications
12. Multinational corporations



ABOUT LIBERTY ADVISOR GROUP

Liberty Advisor Group is a mission-focused advisory and strategic consulting firm.

Founded in 2008, Liberty was formed with a singular purpose: Partner with client leadership to solve their toughest business problems. Our experienced team has a proven track record in Business and Technology Transformation, Product Management, Data Analytics, Business Threat Intelligence, and Mergers and Acquisitions.

We are one of the only consulting firms on the forefront of developing and delivering comprehensive Pre-Launch Product Mobilization (PLPM[®]) and business strategies for autonomous vehicle programs. Our autonomous experience includes planning and executing CES strategies that encompass exhibits and public road demos, designing and mobilizing commercialization strategies, standing-up new supply chains, creating and finalizing CapEx and OpEx budgets, and developing and executing talent management strategies to secure robotic and AI engineers.