



FUTURE TRENDS

Impacting the Exhibitions and Events Industry 2016 Update

IAEE FUTURE TRENDS TASK FORCE

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Introduction

In looking to the future of the exhibitions and events industry, the IAEE Board of Directors created a Future Trends Task Force made up of senior industry professionals and chaired by Francis J. Friedman, president of Time & Place Strategies. The focus of this task force is to look three years into the future and identify major trends that potentially could impact the industry.

The first task force report was completed in 2013. Subsequent reports have been produced in 2014 and 2015. All reports can be downloaded at www.iaee.com.

Because the trends identified in earlier reports are starting to move into the mainstream of the industry, the reader is encouraged to review past reports for more background on these reported emerging trends. Many of the former trends identified in those reports are now more visible in the industry and are becoming part of the active annual planning of show management.

Some of the trends included in this year's report are the continuing evolutionary tracking of issues the task force has been discussing in past reports. These trends are included in this report as well since they continue to evolve and change the future landscape of our industry. A number of historical trends are noted that are evolving into the future as the underpinning technology and applications mature. This report addresses future aspects of these trends to provide insight in what is ahead for the exhibitions and events industry as seen by the senior industry professionals on this task force. For the historical perspective on these trends, we refer the reader to the past reports.

The reader is referred to the Center for Exhibition Industry Research (CEIR). CEIR has published a number of studies this year and will publish further studies in 2017 that contribute to further understanding the immediate changes our industry is undergoing. Visit CEIR's website — www.ceir.org.

Reading this report will enable the reader to understand the industry's challenges ahead and better prepare to successfully meet them head on. The term exhibition is used throughout this paper and when referenced as "the industry" is meant to include trade exhibitions and events. Consumer events will also benefit from understanding the trends detailed in this paper.

1. Exhibition Industry Growth and the Economic Outlook

Global Outlook

Internationally, China's growth rate has slowed significantly and Japan is still in a long-term, very slow growth mode. The European Union (EU) is still battling low economic growth and high levels of unemployment. England's decision to leave the EU, the continuing economic weakness in Greece and several other countries and the mass influx of refugees from the Middle East to Europe has Europe in both a political and economic uncertainty.

The EU's experiment with "negative interest rates" on bank deposit savings as a potential growth stimulus does not seem to be achieving the anticipated results. However, it appears the stimulus actions are having a negative impact on business investment and employment, as well as yielding deflation with its associated negative banking and financial consequences.

Through a combination of reduced China growth and changes in international consumption patterns, commodity prices (especially oil) have fallen dramatically. Reduced commodity prices in basic minerals and oil have severely depressed these sectors both domestically and internationally. It is estimated that it will take several years for these sectors to recover to their 2013-2016 levels. U.S. oil field exploration and development via "fracking" technologies have also declined due to both the international oil glut and environmental concerns.

U.S. Outlook

The U.S. economy in 2016 has had its ups and downs, especially in the first six months of the year. The second half of the year appears to be on track to finish at a 2.5 percent increase over 2015. Unemployment has shown a sharp decline. However, the unemployment numbers do not include those people who have dropped out of the labor force.

The U.S. stock market has continued to see record highs as companies are continuing to show higher earning levels. Many of these higher earning levels have been achieved through financial controls, low cost of investment capital, low levels of capital investments, wage controls, reduced dividend payments and stock buy-backs to reduce the number of outstanding shares.

The financial community in the U.S. projects that there will be a significant "market correction" ahead. This projection is based upon the fact that the stock market has been on an upward trend since 2009, and, historically, these trends typically do not last more than five years before a significant correction occurs.

While hiring is now on the increase, wages have not accelerated, and there are still large numbers of potential workers who have taken themselves out of the workforce. There is an increased movement in 2016 towards a \$15/hour base wage target across many industries with high labor participation levels (e.g., the food service industry). In addition, there has also been a push for extended paid family leave time without the threat of job loss. Labor unions have pushed this wage and family leave agenda as part of their member services activities. The future impact of these agenda issues could be substantial increases in employee labor costs to American businesses.

A new overtime rule scheduled to go into effect in December 2016 has been put on hold. This rule would increase the maximum wage and expanded job classifications of an employee prior to being exempt from receiving overtime pay for working past a 40-hour work week. However, in November 2016 a federal judge granted an Emergency Motion for Preliminary injunction, blocking the Department of Labor from implementing and enforcing the rule. Twenty-one states challenged that it was not Congress' intent to set a salary threshold or to increase those thresholds every three years. If the rule is implemented in the future, the re-classifications are projected to have a significant impact on the trade show and meetings industry where employees work substantially beyond 40 hour weeks when preparing and being on-site for an event.

In 2015, consumers were reducing credit card debt and curtailing spending. Consumer optimism for the future has been on the rise during the second half of 2016. However, consumer debt has also started rising again as employment levels have been slowly creeping up. Consumer default rates on new car auto loans have started to increase again in the second half of 2016 indicating another potential credit default stage in the U.S. economy.

The 2016 U.S. exhibitions and events industry growth rate is showing an overall upward trend of approximately 3.0%. Individual sector rates of growth vary based upon the economic activity in that particular sector.

Congress raised the U.S. debt ceiling in October 2015, which means the Federal Government can borrow more money to fund its activities and it has not been raised since that time.

The Federal Reserve Board has indicated it would raise the basic discount rate (i.e., the cost of money to banks) as U.S. unemployment levels fell. As of November 2016, it has not raised the rate due to economic and political uncertainty in the international markets.

On a post-2016 presidential election basis, it is anticipated that within three years the Federal Reserve Board will have raised the discount rate - possibly several times. Raising the discount rate will, in turn, increase the cost of money and will have a ripple effect on the cost of borrowed money and investment capital. It will also have an effect on the cost of government debt. Increased debt service costs may, in all probability, lead to increased taxes to pay the increases in debt service and other program costs.

The election in 2016 of Donald J. Trump as president, and a Republican majority in both the Senate and the House of Representatives, may lead the U.S. to new policies and government focus in many areas. It may also significantly reduce the Congress-White House struggles of the past several years and help the country make more clearly focused decisions in key economic and policy areas.

Summary

International markets continue to offer exhibitors expanding opportunities, especially in China and other developing areas of the world. In Shanghai, a second major exhibition facility was opened in 2016.

In Macau China, Sands China opened its third integrated resort, the Parisian, in October 2016. The Parisian is the largest integrated destination in Macau and includes over 3,000 hotel rooms, over 300 shops, entertainment areas, an arena as well as broad levels of exhibition and function space. Several other major integrated resort developers (e.g. Wynn Macau) are also constructing new integrated facilities. Macau is the only area in China where gambling is permitted.

International trade show and event attendance is expected to grow in both the U.S. and internationally as content and resources to foster economic development are displayed at trade events, fairs, music and event festivals.

Exhibitors continue to invest in e-based marketing products and services. Budget allocations to e-based products, services, content, etc. are expected to continue their increase in the years ahead.

Future Trends Task Force Considerations:

The 2016 task force considered three key issues:

- Is the U.S exhibition industry GDP dependent?
- Can the exhibition industry grow faster than the rate of U.S. GDP growth?
- What impact will technology have on the industry?

The consensus of the task force is that, to a large degree, the industry is tied to overall economic activity and the level of GDP. Individual economic sectors will experience varying levels of growth or decline based upon the economic activity in that sector.

For example, the oil and gas exploration industries are currently in significant decline based upon a 50 percent reduction in the prices of these commodities over the past 12 months. Trade shows in these industries are also feeling the impact of these declines.

Internationally, there are differing opportunities based upon the country and the economic sector within each country. The task force concluded that the exhibition industry's future is, in general, closely tied to the overall level of economic activity and the relative economic performance of the industry sector each show serves.

Within the next three years, there will be important economic factors that will impact the industry. These include:

- 1) Interest rates being raised by the Federal Reserve Board
- 2) A significant stock market correction
- 3) Increased taxes and/or significant tax policy changes
- 4) International banking system issues
- 5) Economic and political turmoil in various international countries (e.g., Greece, England leaving the EU)
- 6) Continuing Middle East hostilities and global political instability

The outcome of these six items is unknown at this time. However, if they do occur there will be an economic impact on the trade show industry. As experienced over the 2008-2015 period, exhibitor marketing budgets and attendee travel budgets are tied to the general level of economic activity and access to business finance sources. While there is a strong predisposition for U.S exhibition industry fortunes to follow the GDP track, there also is an opportunity for the industry and individual shows to grow faster than GDP by offering highly competitive marketing opportunities for both exhibitors and attendees.

2. Potential Impact of the Donald Trump Presidency

The election of Donald Trump as President of the United States will have a series of impacts on the policies and direction of the United States over the next four years. As of this writing, President-elect Trump has not yet been sworn in as President and it is too early to know his agenda for the next four years.

Based upon pre-election statements from Mr. Trump, the following generalities may affect the U.S. economy and both the domestic and international trade show industry over the next three-four years.

- U.S energy independence, including "clean coal", fracking and the Keystone pipeline
- Tighter control of the U.S borders and visitor screening
- Tighter control of visa clearances, possibly including international trade show visitors
- Tax law changes to simplify the tax code, encourage business investments and

facilitate the return of capital to the U.S economy from overseas holdings on the part of domestic companies

- Increase domestic manufacturing and related job growth
- Increase infrastructure investments and related job growth
- Modify/restructure the Affordable Health Care Act (i.e., Obama Care) health care system to a new format and payment structure
- Re-negotiate certain existing international trade agreements
- Increase border security and build some form of barrier between the U.S. and Mexico to reduce undocumented immigration and illegal drug trafficking
- Overturn the concept of "sanctuary cities" and the shielding of undocumented/illegal residents.
- Tighten visa controls for visitors who over stay their visa and the deportation of convicted criminals who are in U.S. on an illegal basis.

Given President-elect Trump's views, there will most likely be other policy changes related to finance, taxes, safety (both physical and data security), with the end goal of stimulating employment and economic development. With a Republican majority in both the House of Representatives and the Senate, legislative changes will likely move forward more quickly over the next two years than over the past two years under President Obama.

If the economy improves and unemployment goes down, it would logically be expected that the Federal Reserve would raise the fundamental interest rate. The impact of any rate increase would result in more expensive loan costs (both business and consumer) and an increase in debt service expenses for all government entities.

With Mr. Trump being positioned as a growth oriented president, it could be argued that the U.S exhibition industry will benefit both directly and indirectly. Directly, new policy changes lead to new content that can be presented/demonstrated at exhibitions and events. Indirectly, changes in policy and re-focusing the economy may encourage new product development, new resource partners and new ways of thinking that can be presented at exhibitions, conferences and events.

On an overall basis, as a projected growth oriented presidency, the new administration may be viewed at this point as at least neutral, if not positive for the three-year future of the industry. A global recession and/or negative international responses to changes in U.S policy could potentially cause negative effects on the U.S economy and in turn the industry over the next three years.

3. Demographic Changes

The demographics of the U.S. and major world economies continue to evolve. The evolution of population demographics also shape the society, shift topics of interest, social reference groups, trust, media use, content and technology adaption. As is the case on a larger scale, changing demographics will continue to impact all marketers in the exhibitions and events industry. The following generational breakout details each generation.

- Gen X = 37-52 yrs old (82 million people)
- Gen Y = 20-36 years old (Millennials)
 - o Gen Y.1 = 20-26 years old (31 million U.S population)
 - o Gen Y.2 = 27-36 years old (42 million U.S population)
- Gen Z = 2-19 years old (nearly 74 million people)

Over the next three years of this more refined demographic breakout, it is important for the industry to recognize the following major trend changes:

- 1. The exhibitor executives who are now (and in the future) making marketing decisions will be Gen Y.2 executives, 27-36 years of age now and 30-39 years old in 2020.
- 2. Exhibitor team members who will influence marketing decisions are in the Gen Y.2 cohort of 20-26 years of age now. In three years, Gen Y.2 will be between 23-29 years old and starting to be responsible for making exhibiting investment decisions.
- 3. In three years, Gen Z will be the junior marketers of 20-23 years of age and contributors and influencers to exhibitor marketing teams.

The importance of the above trend changes for the industry is that each of these age groups has a different level of technology sophistication, media preference, software and messaging formats and time/speed sensitivity.

The industry will need to understand that building and marketing an exhibition will require a closer analysis of the demographics for its target audience and the media and messaging protocols of its various audience segments. For example, senior executives of Gen X may prefer copy delivered via direct mail and email messaging. Gen Z junior team members on the other hand may require video messaging via a 10 second cell phone video or by another service provider, such as SnapChat.

Changes in exhibition marketing messaging and media channel, especially with the introduction of such technologies as Virtual Reality (VR), will need to be substantially different over the next three years as demographic segments and their techno-centricity evolves. The industry will need to stay abreast of these changes in order to be able to successfully market its products and services to these changing target audiences.

4. U.S. Labor: Laws/Costs

There is a movement to make the minimum wage \$15/hour. This trend is being driven by union organizers in large labor intensive industries, such as restaurant workers, and more expensive cities such as New York City. In addition to the minimum wage, these same factors are pushing for extended paid "family leave" and the guarantee of a job upon return from leave. This issue is in active debate in a number of cities and social circles. Some companies (especially technology companies) now offer paid family leave as part of their employee benefits package. It remains to be seen how this paid leave initiative will progress over the next three years, how the businesses in different industry sectors will embrace it and the laws that will be proposed to implement it. The industry will need to pay attention to this and the minimum wage over the next three years.

The federal government has recently enacted new laws that affect the definition of worker job categories exempt from overtime for work hours beyond 40 hours per week. Job classifications have been changed and the annual salary <u>not</u> exempt from overtime has been raised from \$23,660 annually to \$47,476 per year. The impact of this adjustment will be to raise the production costs of exhibitions over the next three years. Not only will the salary of an organizer's personnel increase overtime expenses, but so will the salary and overtime costs related to suppliers and outside service companies who help produce a show. In addition, venue personnel costs will also go up either through union contracts, state minimum wage laws and/ or overtime laws.

These laws will also affect exhibitor costs to exhibit. Exhibitor personnel also work long hours in their exhibiting efforts and would be affected by these changes in the law. Areas to be negotiated in the future may include the definition of "work." For example, if a person works in a booth all day and then takes clients out to dinner, is this dinner considered "working hours" and do they count against the 40-hour work week calculation?

IAEE and *Trade Show Executive* magazine have conducted salary surveys of different job descriptions and existing compensation levels. From these surveys, it is possible to project show manager jobs that now make \$40,000 a year and will have to be paid overtime beyond 40 hours per week, or be given a salary raise to \$48,000 annually. Over the next three years, the industry will be paying more attention to employee issues related to job classifications, timecards, hours worked, overtime hour calculations and total compensation structure. The impact of these additional personnel costs can potentially have a negative impact on the profit structure of the industry…especially small shows/events with tight budgets.

As of this writing, a Federal judge has placed an injunction stop on the implementation of the proposed overtime rules. It is expected that the question to implement or not implement some form of new overtime legislation will be resolved by the first half of 2017.

5. Safety and Security of Exhibitions and Events

Safety and security continue to be concerns for the industry. This includes both natural disasters and human-initiated incidences, such as civil unrest and terrorist acts. It also includes issues related to incoming freight and marshalling yard screening. The Future Trends Task Force has previously recommended that each exhibition and event have a revised and updated crisis plan in place for each event and to have pre-event planning with the venue, and if necessary, local authorities.

On 28 July 2016, the International Association of Venue Managers (IAVM), the International Association of Exhibitions and Events (IAEE) and the Exhibition Services Contractors Association (ESCA) announced the launch of the Exhibitions and Meetings Safety and Security Initiative (EMSSI). This initiative is a public/private one between the Safety Act Office of the Department of Homeland Security, venues, contractors, industry associations and organizations who produce events. Being led by IAVM, the outcome of the initiative is to outline national guidelines that are in compliance with the Department of Homeland Security's Safety Act Office. Expert security professionals from outside the industry will provide objective input, context and expertise within federal security agencies. In addition, ESCA has implemented a national Worker Identification System (WIS) badge security registry and data base program that through the use of scanning technology allowing access only to workers whose identification number have been sent to the venue in advance of move-in and move-out of a show.

Visa waivers for exhibition guests continue to be a concern for the industry. The incoming administration has made border security and removing international guests who have overstayed their visa dates priority issues. Presently, there is no indication as to the direction the new administration will take relative to visitor visa waivers and freight inspections.

International freight and inter-state freight inspections are potential areas of concern. The <u>U.S.</u> <u>Customs and Border Protection</u> provides security at 328 ports of entry in the U.S. Through multi- and bi-lateral relationships with other countries, joint efforts are undertaken to strengthen security of international freight. There will most likely be an ongoing dialog over the next three years between the industry and the administration relative to freight, visa waivers and international visitors.

Physical security, including strikes, public demonstrations, mass shootings and civil unrest, is a growing concern for the industry as the United States, and many international venues, may be threatened by various international terrorist groups and their domestic sympathizers. Both organizers producing a large number of events and organizers who produce major events (over 200,000 net square feet), as well as major convention center facilities have policies and practices in place for these potential crisis situations. However, one cannot assume these practices and policies are current and in effect across the entire industry for each show or event.

The Future Trends Task Force recommends that crisis and contingency plans be regularly reviewed by organizers. The plan should also be reviewed with the convention center staff well in advance of the exhibition. Likewise, understanding the venue's plan is also important, and discussions should take place on whether enhanced security initiatives should be implemented, including involving key local authorities.

6. Payment Card Industry Data Security Standard (PCI DSS) Changes

The <u>Payment Card Industry Security Council</u> is the organization that maintains and evolves the PCI data security standards for merchants and financial institutions who process credit card payments. Currently, there are no federal laws requiring PCI compliance; however, many states have laws referring to PCI DSS.

Over the past year, the council has begun upgrading the security aspects of its services so that credit card fraud, account hacking and other types of credit card abuses can be eliminated or significantly reduced. This security upgrade is an extensive and expensive process. In all likelihood, changes will increase the industry's costs for processing credit card charges, no matter the type. How much of an increase will vary by credit card, amount charged and the credit card service provider.

The cost to process credit card charges will increase over the next several years. The net payout to the exhibition organizer may be less than current payout after factoring in these increased credit card processing charges. Looking ahead three years, organizers will need to review their credit card processing practices and pricing in order to effectively manage the increased costs for credit card processing.

An overview of the new PCI updated security protocols and systems conversion issues and cost drivers may be found on page 22.

7. 5G Technology

Implementation of a faster wireless service called 5G will occur within the next three years. This means it is the fifth generation of wireless technology and the next higher level of service above the current 4G wireless technology. Service speeds will be 300-500% faster than current 4G capabilities, and 5G will also have the capability to deliver higher quality picture and sound as well as Virtual Reality (VR) to the handset. New York City is one of three test markets for assessing the technical and practical issues related to this service. Also, the telecommunications industry and the U.S. Federal Communications Commission (FCC) are working to develop final standards.

One of the benefits of 5G technology reported for the industry is that it can penetrate the walls of convention centers and deliver full wireless service without having to wire the convention center. If this proves to be effective, attendee wireless service will significantly increase while reducing show organizer budgets for providing in-hall wireless connectivity.

With 5G technology, marketers will be able to provide significantly higher quality two-way marketing programs directed to end users, including VR programming, multi person two-way interactive conferencing, 3-D engagement and a host of additional higher quality communication and product demonstration protocols. To provide a measure of speed and capability a good 5G connection is estimated to have the ability to download all 600 episodes (just over 200 hours) of The Simpsons, a popular television program in the U.S., in high quality art and graphics, in approximately 30 minutes.

This faster wireless service is a communications tool that may be used by the industry to promote exhibitions. Given the capabilities of this technology and its use by competing marketing entities and exhibitors, the industry will also have to learn how to use the full capabilities of 5G technology in order to competitively promote its shows and events.

8. Artificial Intelligence and Bots

Artificial Intelligence (AI) is a special class of software that is used to model human behavior and human decision making processes so computers/machines can re-produce human behaviors and processes. All technology and sophistication has increased dramatically over the past few years. Professionals in the field have gathered more experience with All and the power of the computers being used have increased power and processing speeds.

A concept titled the "Factory of the Future" will include Al as part of its production processes that will be executed by robots (i.e., bots) and robotic systems. It will also use the concept of IoT (Internet of Things) as part of its management systems.

Speech bots are an area of AI that is slated to grow substantially over the next three years. Speech bots are AI programs that translate their activities into spoken human voice. An example of speech bots is calling customer service lines of banks, airlines, etc., and having the bot answer the phone and direct the call. Currently, these speech bots have a limited scope of information they are able to provide and/or activities they can perform. If they cannot handle an inquiry, they inform the caller and then pass the caller to a customer service representative — a live person.

The speech bots to be unveiled going forward will be "smarter" than the current generation and will have significantly more capabilities and functions built into them, including the following characteristics:

- Ability to understand natural spoken language (in any language they are programmed to understand)
- Ability to have any spoken "voice," tone, dialect, rate of speech, etc.
- Ability to "carry on a conversation" due to increased programming sophistication and the ability to mimic human information processing

Speech bots will be employed in both outbound and inbound marketing. Bots can be employed on a 24/7 basis with no breaks, overtime payments, variation in message delivery quality or days off. They can also be programmed to data-analyze the feedback received from their interactions. This could include key customer concerns and problems, comprehension assessments of the messages being sent out, etc.

Speech bots are being developed and implemented now – especially in outbound marketing. It is anticipated they will be more broadly rolled out and implemented over the next three years. The implications of speech bots for the industry is that exhibitors will be able to contact, engage and sell to their clients much more inexpensively using speech bots as part of their outbound and inbound marketing efforts.

By having standing files of information, videos, demos, etc., already pre-programmed and available, the speech bot will also be able to determine, based upon the call, which information to send the prospect, when to schedule a customer follow-up and if it should be from a bot or a human. Bots will have the capability to lower customer contact costs, increase contact frequency and increase the quality of data captured in a call. It is anticipated that large marketers who are also the larger exhibitors in terms of on-site footprint will be the early adopters of this technology and will also compare it to their in-person marketing results as well.

The exhibition industry will also have access to this technology, possibly through internal company development or through a service bureau. Through the use of this technology the industry can look forward to generating the same benefits as exhibitors and other marketers. For example, bots might be used for pre-show marketing messages, pre-registration processing, exhibitor customer service, etc.

9. Internet of Things (IoT)

The Internet of Things (IoT), is an emerging technology that can connect various objects

through the Internet via microchips planted in a specific object. Small memory microchips (MEM's) can be planted in almost everything. Each MEM has its own unique Internet address so it can be contacted and/or connected via the Internet.

For example, SAMSUNG, an electronics company, recently introduced a <u>consumer refrigerator</u> that has a 12 inch microcomputer on its front door. This computer has a digital keyboard onscreen and is a family message center for sharing notes, calendars and photos. Notes can be typed onto a mobile phone or computer, or onto the family message center, for the family to see and respond. Another feature of this computer is that it can be connected to the Internet. On a grocery trip, the shopper can dial up the refrigerator on a smart phone, turn on two cameras inside the refrigerator and see what is needed to shop for based upon a visual assessment of the items still inside the refrigerator.

loT technology will be the base technology for expansion of distance management of processes and controls, managing and assessing hazardous environments, distant data gathering, services and repair, customer service and a whole range of new applications. loT is a fundamental enabling technology of the future.

It is not clear how IoT will directly impact the creation and production of trade shows, meetings and events. It is clear that IoT can be used by exhibitors to manage real time product demonstrations that might take place away from the exhibition facility possibly in a factory, laboratory or remote site.

For example, an exhibitor could use IoT to demonstrate to a booth visitor how a IoT enabled bulldozer can move earth up a steep grade in a quarry located 300 miles away. The booth visitor could take the controls and do personalized demonstration of the bulldozer. Cameras on the bulldozer and around the quarry site would provide the booth visitor with evidence of the demonstration. The entire demo could be captured on video, including the visitor's IoT experience, and marketed again to the visitor as an after-show follow up to move the sale to the next level.

loT is an emerging fundamental technology that will have a long-term impact on the economy and how things are done. loT fosters interconnectivity, interactivity and collaboration directly – without the need for an exhibition.

The industry will need to track the use and applications of this technology, and its co-application with AI, to anticipate and understand the changes taking place in the markets served by each exhibition or event. With this understanding, show management will be able to provide appropriate show focus and programming to meet the changing needs of the audience that show serves.

10. Experiential Design

"Design thinking" is growing in popularity as a way to meet the evolving needs of attendees and exhibitors in event participation. Design thinking as a professional discipline will also help accelerate change across the entire the industry to help keep it a continued viable marketing medium. Experiences are valued more than ever by those individuals attending exhibitions and events, including the "content" of the event and possibly even more so, the "contacts" of the event.

Organizations are being challenged to design experiences that are memorable for the many different age groups and personas that potentially can go to their shows and events. Millennials want to meet face-to-face, and including those individuals in design thinking, meetings are showing positive dividends for organizations. People of all ages are showing a desire to be with their community or tribes at meetings of all sizes. Bringing in stakeholders like exhibitors, sponsors and attendees into the design thinking process brings solid rewards for organizations as many great ideas come from listening and asking questions of longtime supporters of the organization's goals and objectives. Each generation has its own unique needs and specifications. The future of exhibition and event design is to have programming segmented in content and delivery to appeal to the different demographic segments. The industry is moving in this direction with a trend towards on-floor theaters, education and shorter presentations.

Experiential design will also need to include enhanced on-site software that delivers more information about the event, creation of personal schedules and appointment scheduling and matchmaking services so attendees can find other attendees they might want to contact and network with. In addition, on-site software will need to be designed and delivered consistent with its audience's day-to-day software usage. For example, Gen Y tends to use Facebook and Twitter while Gen Z tends to use Snapchat and Vimeo.

The industry should look at experiential design as an important tool to evolve and enhance the attendee experience and the continuing justification for trade show investments.

11. Big Data as a Service (BDaaS) and the Use of Data

There is an increasing need for the industry to provide data to exhibitors about an exhibition to help the exhibitor decide whether to exhibit and to evaluate its exhibiting results. There is also a growing need for exhibition and event professionals to utilize data to assess their own show, develop appropriate marketing and production plans and assess the results of a given show. The progression of different population segments and their differing media consumption patterns over the next three to five years, as discussed in this report, will mandate quality data and data analysis for show producers if they are to deliver shows and events that will be embraced by these demographically evolving target audiences.

The industry in general has not been a data driven industry. Building and managing a business utilizing high quality data has not been an industry management or budget priority. As a result, as businesses have turned to "big data" and BDaaS to make better decisions, the exhibitions and events industry is realizing it needs better data capture, data handling practices and analytical techniques if it is to make quality decisions utilizing data.

The industry needs to be focused on getting data fundamentals right before moving on to big data. For example, data quality currently being captured needs to be improved. Current industry databases vary greatly in terms of their structure, quality, data integrity and accuracy. Data capture and record keeping fundamentals need to be improved. Lists need to be cleaned and duplicates or different spellings of the same name need to be cleaned out of the data set.

Consistent data structure and data entry practices need to be implemented in order to ensure the data in an organization is consistent across all its databases to ensure data comparisons are accurate and reliable. Once data quality is improved, the entire exhibitions and events industry can then progress to using Big Data or BDaaS analytics to demonstrate clear value metrics for both the attendees and exhibitors.

The use of data for dynamic decision making is currently absent from the industry. There is a movement in the analytic world on the use of dynamic data and the industry's leadership needs to be pushing the industry forward to be more strategic in the use of its data. Suppliers can help the industry move forward on the issue of providing quality data that is much more than just tracking basic demographics, such as age and job title for example.

CEIR has produced a Digital Toolkit Series. The following reports have been published and can be downloaded.

- Source report, 2016 Digital Toolkit to Enhance the Attendee Experience Exhibitor Offerings
- <u>2016 Digital Tool Kit to Enhance the Attendee Experience Organizer Pre-event Communications & Registration Offerings</u>

The research side of producing an exhibition is in transition where data structure standards are being set and how the data sets can be more useful. Over the next three years, the industry will need to know what clear/clean data is and how to create, hold and use the data.

The industry is being challenged to enhance the attendee experience through data capture capabilities, analyze the data and then turn the results of the analysis into business plans for engaging experiences on-site. The industry will need to move in this direction if it wants to be able to prove and justify itself to increasingly analytical exhibitors. Over the next three years, it is critically important for the industry to focus on data capture, handling and broadening the industry skillsets to be able to both capture "clean data" and translate the data into business/marketing plans and compelling onsite experiences.

12. Smart Phones, Computer Operating Systems and Software

Within the next three years, all of the major wireless handset and tablet makers will have introduced new products capable of handling high speed signals (e.g., 5G) and delivering both VR and augmented reality pictures along with high quality sound and personal security capabilities (e.g. iris scanning before access). New generation chip sets, screen technologies and software programming will enable manufacturers to bring these devices to market at prices consumers can afford. These same handsets will also be able to be specially configured for business applications and programming.

New software apps will continue to be introduced to accommodate the upgrades in hardware capabilities and to fulfill new customer smartphone/lifestyle wants and desires. These handset upgrades will further encourage and support the "mobile lifestyle" of each generation.

The mobile lifestyle of each generation will be different and based upon age and social reference groups. For marketers, this means having to understand how and why different generations use their smartphones the way they do in order to "package" messaging that resonates with each different lifestyle/age group. For example, Gen X may use their smartphone for phone calls and to share pictures of the grandkids. Gen Z may not speak on the phone but use it for transmitting short text streams and selfie-style pictures that disappear 10 seconds after they are opened.

The introduction of these new smartphones means higher quality direct-to-customer marketing programs independent of time and location. They change the speed and immediacy of relationships between buyer and seller. In three years, the new handsets will change the level of engagement a seller can have with a buyer via more creative bandwidth and faster transmission speed.

For example, the new handsets will enable product demos with Virtual Reality and 3D engagement. This capability (including b2b selling) sets a higher standard of buyer/seller engagement that may diminish the customer motivation to attend an exhibition to experience a product.

These upgraded smartphone technologies will also be available to the industry. This includes preshow marketing, at show demonstrations, on-site product tours, on-site educational VR sessions to the handset, etc. The upgraded handset capability opens up the same creative and marketing opportunities to the industry as it does to exhibitors and product marketers. The industry will need to embrace this capability in order to meet the needs of various audience segments and keep up with competitive marketers.

13. Virtual Reality (VR)

Virtual Reality (VR) is growing rapidly and will continue to grow. Video games are being

developed to have VR as the basic structure for first-person interactions. The gaming industry announced this fall that it will start introducing VR games in the next round of gaming upgrades. It is predicted that VR will soon be in retail stores in a big way and will create a virtual experiential environment for consumers. Smartphones are also planned to have upgraded 3D and VR capability within one or two generations from now.

Each year, television networks have "UpFront" presentations where they speak with advertising companies around March and present what the fall television schedule will look like. The UpFront in 2016 presented more VR related programming. There is also a new industry trade show, 20/20, that is specifically focused on VR media creation and programming.

Corporations and travel sites have already started introducing VR in their marketing programs. The Los Angeles Convention and Visitors Bureau introduced a VR site tour at the 2016 MPI WEC meeting in Atlantic City, New Jersey. Three years from now, most destination marketing organizations (CVBs) and most major hotels are expected to have VR tours.

Users of VR will initially be Gen Z, gamers and millennials who readily adapt to rapidly advancing technology. Three years from now, VR will be a regular feature in most marketing programs. The impact of high quality VR marketing sets an expectation of engagement and product exploration beyond the "flat" environment of in-person exhibitions, unless exhibitors incorporate VR into their exhibiting experience.

In the next few years, it is expected that exhibitions and events will be deeply committed to VR technologies. In the larger picture, society will become acclimated to 3D virtual reality experiences, such as television programs and sales campaigns, through direct to customer VR messages.

The cost to produce VR programming will decline over the next three years as the cost of VR cameras and software is reduced and the technology and skills to produce VR programming expand. Large exhibitors and forward thinking marketers will move their messaging technology to embrace the delivery of VR campaigns. With the increased speeds ahead in both 5G and digital cable services, VR programming will be even more robust and engaging than it is today.

The long-term threat of VR to the industry will be companies offering their customers customized VR sales presentations on a "direct- to-customer basis." These presentations will seek to provide customized engagements to answer a customer's specific needs — without the need for a trade show.

Looking ahead three years, the trade show industry will need to be able to produce VR programming, either as part of a trade show marketing effort or as a stand-alone product. The addition of VR capabilities to a trade show team's marketing arsenal gives that team more options in terms of promoting an existing show and in brand extensions or new products delivered in VR format.

14. Augmented Reality (AR)

Augmented Reality (AR) is a technology capable of providing a digital file overlay onto a digital photograph. It was made wildly popular in 2016 with the global Pokémon Go release of the game promotion. In Pokémon Go, players use a mobile device's with GPS capability to locate, capture, battle, and train virtual creatures, called Pokémon, who appear on the screen as if they were in the same real-world location as the player. The game supports in-app purchases for additional in-game items.

Pokémon Go included a smart phone, GPS technology, graphic files of Pokémon characters and the AR software technology that enable the pokemon characters to be place digitally onto the smartphone's picture exposed at the appropriate location. All of this is also delivered wirelessly to the smartphone.

The implications for AR have been rated as significant by technology professionals. Some of the larger uses include repair manuals where a technician can take a picture of a piece of equipment and have a schematic repair overlay placed on his screen to know how to fix it or install a new part.

Digital file augmentation of a real-world picture (or video) enables additional information, solutions or demonstrations to be brought to that reality and in real time. For example, an architect can provide a digital overlay of a building addition onto a picture of the building while the client is standing in front of the building.

AR can be used in the exhibitions and events industry to see what various physical elements of a show hall or exhibition site would look like in reality when digital files of those elements are overlaid onto a picture of the site in real time. Similarly, it has the potential to offer many alternative product formats/colors/price points (as if they were Pokémon characters) to a broad base of test market customers to have the customers evaluate which product configuration they wanted the company to bring to market.

AR will become both a creative element in product design and in product marketing. Pokémon Go demonstrated the ability to deliver many different Pokémon characters to the various GPS coordinates of the global game all at one time. By extension, AR has the capability of delivering many different customized solutions (through different digital files) to customers in various sale, repair, and/or marketing situations.

It is too early to tell how AR will evolve. Pokémon Go, however, demonstrated a broad range of potential uses and application for this technology. The <u>technology press</u> believes it will be an important technology as time goes on and as applications and uses for the technology are rolled out. As present they see it as having an important application in education and in repair and maintenance.

15. Updates on Topics from 2015 Report

Below are a series of updates from the 2015 Future Trends Report and are meant to provide incremental updates to the larger topic discussion in the 2015 report. The reader is encouraged to read the 2015 report for a more thorough background.

Onsite Data Capture

On-site data capture and technology for access control continues to be an important trend in the exhibitions and events industry. The collection and analysis of appropriate data enables event organizers to learn more about how their event functioned, where people went on the show floor, aspects of the event that had high levels or low levels of traffic and customer levels of on-site participation.

Data capture devices include smart badges, wrist bracelets, under aisle carpet sensors, badge swipe heat maps and low power beacons, such as iBeacon (a form of low power Bluetooth wireless communications).

Generally, these techniques have only been experimented with in the industry and not broadly implemented. For example, "heat maps" of attendee badge swipes in each booth are able to graphically represent attendee aisle traffic patterns over the complete show date and are provided as part of a registration company's service to the show organizer.

Experience from registration companies appears to show very few shows request this information on a post-show basis even though it would provide relevant data as to areas of the show design or exhibitor booths that had the most traffic or the least traffic. Part of the apparent issue is how to analyze collected data, convert that analysis into a meaningful understanding of the show and to then take the analysis and make a plan out of it.

Hotels, theme parks, concert promoters and other event producers are using RFID systems for access and tracking. These systems tie the user of the RFID device to a database that is also tied into the user's credit card. The Disney parks and on-site hotels are pioneering this fully integrated application. Every access point and credit card charge is tracked and the visitor's activities analyzed.

On-site data capture still offers the industry significant opportunity to better understand its show visitors and their on-site behavior. This understanding can significantly help enhance the quality of show design and the attendee and exhibitor experiences.

Over the next three years more focus will need to be devoted to on-site data capture and developing analytical assessments of the captured data to assist the show organizer to increase the quality of shows experience and utility for both attendees and exhibitors.

Social Media Marketing

Social media marketing is continuing to expand its influence in all aspects of business, marketing and the greater society. Social media marketing is becoming more sophisticated almost on a day-by-day basis as new software, multi-media and graphic capabilities, and increased network speeds are introduced into the market.

2016 has seen a number of new techniques introduced into social media marketing. For example, Pokéman Go became an international sensation almost overnight. It combined mobile computing, augmented reality, geo-tagging and a contest to drive its high levels of international engagement and popularity.

Notably also about social media marketing and the Pokéman Go example was...once the craze was over...it was over.

Social media marketing moves very quickly on the up side of popularity and on the down side of popularity. This is why social media marketing must be a constant activity for brands and trade shows.

As noted above with the Pokéman Go example, social media content is evolving to include every form of media and content presentation. Social media marketing has become very competitive and increasingly more creative as new tools, techniques, creativity and budgets are added to the mix to attract and engage customers.

The advanced Internet, Wi-Fi and venue capabilities discussed elsewhere in this report will facilitate the growth of social media marketing and social media utilization in the years ahead.

New analytical tools and processes are enabling marketers to better understand what their customers want and how to convert them from prospects to customers. As a result, budgets for social media content are increasing on a regular basis and are projected to continue to increase well into the future.

As smartphone capabilities continue to increase to include 5G, VR and 3D, social media marketing sophistication will also increase. This cycle of technology advances and corresponding increased social media marketing sophistication is going to move faster and grow more robust as time goes on.

Staying current with these increases in marketing sophistication and applying them appropriately will have to become a permanent part of the exhibition industry's strategic planning and marketing practices.

Facility Data/Wi-Fi Infrastructure Capabilities and Costs

Because of the use of mobile communications and e-delivered entertainment, all professional sports teams are wiring their stadiums and arenas with high speed Wi-Fi networks to keep their fans connected on-site — rather than at home watching the game on a big-screen TV. The <u>San Francisco 49ers</u> spent \$125 million wiring their new stadium with a system that allows fans to use their smartphones to watch the game (second screen), order food, buy team merchandise and stay connected with their friends.

In the exhibition industry, the rapidly increasing use of smartphones as well as exhibitor demands for in-booth connections to the Internet, venue and facility data and Wi-Fi infrastructure capabilities, are concerns for show organizers and venue managers. The same concerns hold true for data and Wi-Fi capabilities in the main hotels used for an exhibition or a large meeting.

As noted in this report, 5G technology is moving ahead within the next five years. However, assuring 100% signal coverage, enough consumers with 5G smartphones and getting all the bugs worked out of the technology can potentially take another two to three years.

Over the next five years waiting for 5G to be perfected, exhibition organizers want to be assured that venues have appropriate bandwidth and throughput capabilities to meet the needs of their attendees and exhibitors.

The dialog as to the types of wireless services to deliver, and who will pay for these high-bandwidth and data services, will continue. Venues are looking at significant capital costs and there is a concern that rapid technology changes (e.g., 5G) will make their investment obsolete without an appropriated re-capture of that investment.

The Future Trends Task Force sees this as an ongoing discussion in the industry as show organizers will want increased service delivery and venues want to hedge their financial investments and return on those investments in light of the future 5G and other technologies that can potentially make those investments obsolete.

Trends in Adult Education Education is one of the mainstays of the exhibition industry. The design and delivery is becoming even more important to the success of the show it is delivered in.

The current trend is towards more on-floor educational theaters and small education sessions on the show floor. Anecdotally, this seeming trend may be a response to the lack of the attendee's time and unwillingness to walk some distance off the show floor to more formal function or classrooms.

It remains to be seen if this is a true trend change in on-site education and demonstration delivery styles and/or a trend change brought about by changes in the demographic composition of audiences.

In many professions, education contributes to certification in that profession, and many shows include educational courses designed to contribute to professional certification. Therefore, education at trade events that contributes to certification is an important motivator for attendees to attend that event.

As noted in this report, the exhibitions and events industry now faces the broad demographic spectrum of traditionally taught attendees and younger attendees who are computer-assisted learners. The industry also is facing the demographic differences in attention span that contributes to some of the variances in teaching and learning styles of multiple demographic groups.

The consensus of the Future Trends Task Force is that education will be a continuing and important dynamic in the creation and engagement of a given exhibition. The value of the educational content and its delivery methods/technology will contribute significantly to the levels of engagement, perception and success of a given show.

The traditional approach to education and content delivery include the following approaches:

- ➡ Full day workshops
- One-to-three-hour workshops
- Keynote addresses
- Panels
- Breakout sessions
- On-floor theaters
- In-booth exhibitor presentations
- "Campfire" presentations (short presentations held either on or off the show floor)
- PowerPoint and oral styles of presentation

With attendees increasing exposure to VR and AR media through games and educational programming the task force recognizes that the industry needs to do more research into understanding how people learn and how education should be delivered across the learning/technology style spectrum in the exhibition environment.

The continuing demographic changes of the attendee population presents a continuing evolution as to what works today and what will work tomorrow. Teaching and learning styles will continue to change as each demographic group moves into prominence within the exhibition attendee universe of a given show.

Producing a quality education program takes thought and money. Part of the future of educational program development will be the testing of various program formats and financial models. The more traditional pricing and content delivery programming will need to be reconsidered as the techniques and science of delivering high quality content, and related costs, are re-evaluated.

There are potential problems and opportunities ahead in the delivery of face-to-face education programming. The quality of that programming, its cost to the attendee (especially paid vs. free online education) and the quality of the delivery approaches will require show organizers to increase their knowledge and skills in this area.

Data Security

Data security has become an increasingly important issue in today's society and will only grow more important in the future. Data breeches revealed in the 2016 U.S. presidential election demonstrate that no matter how secure data appears to be it is vulnerable to hacking and stealing. Even federal government data has proven vulnerable to hacking. In this day in age, credit card security breaches are an almost regular occurrence.

Historically, the exhibition industry has not been particularly worried about this issue nor spends much time and effort on it. Going forward, however, data security and data security protocols will be important issues for show management and industry vendors to consider and then build appropriate data protocols for secure data systems.

Payment card security changes noted in Section 6 of this report will need to be incorporated into this aspect of show management financial and data security protocols.

The task force envisions organizers taking a two-pronged approach:

- Insuring constant upgrades and monitoring of data security systems and protocols.
- Preparing a contingent "reputation management" plan to rapidly address any data breeches and the action steps necessary to deal with such a situation

This plan needs to be constantly updated and key roles and responsibilities clearly spelled out and rehearsed. A reputation crisis creates a time-crunch response and the organizer needs to have this response well prepared and ready to go.

Data privacy is also an ongoing concern. There is a growing reluctance for people to share their personal data because of over-marketing to individuals, too much email traffic, off-target marketing clogging up in-boxes and fear of data hacking.

Part of data privacy also relates to getting permission from attendees to share their data and disclosing where and how it is shared. The task force noted that there is currently a small trend for people to sell their personal information to a marketer. The potential for increased data capture and analysis capabilities is exciting due to the new technology that is available to capture the data. However, attendees will need to receive value and/or an explanation in exchange for sharing their information.

As the future unfolds and people and businesses are concerned with data sharing, show management will need to communicate how shared data is protected and the value that is received for sharing data, so attendees understand they are, in fact, getting value by providing their information. Also in the future, legislation on data security and complying with private data security and management regulations will need to be an ongoing element in the exhibition industry legislative focus.

Part of the goodwill and reputation of a show audience rests on the safety of its exhibitor and attendee data. The negative public relations of an online rant by hacked exhibitors and attendees will injure the reputation of a trade show.

Experiential Exhibition

As technology adds more engagement and digital experience possibilities for potential attendees, and as younger attendee target groups are increasingly "digital sophisticates," the exhibitions and events industry must address the question, "What has to happen at the in-person, face-to-face show experience to keep the exhibition experience dynamic and engaging?

This is an especially pressing question to be addressed over the next decade where attendee demographics and technological sophistication will transition from the old guard, Gen X, to the Millennials and Gen Z's who will become the new managers and "rainmakers."

Music festivals and other types of active-engagement events have high levels of appeal to younger demographic attendees. These types of events program their offerings to assure they are on target with the engagement needs of their younger audiences. As the younger demographic audience takes on a higher level of representation at business-to-business exhibitions, the elements of show design must evolve to engage this audience and drive their show experience and level of engagement.

As business-to-business marketing evolves, the range of different formats an organizer is able to produce must also expand. No one format can serve all the interests in a given market. An organizer will need to be skilled and flexible enough to produce event experiences, in various event formats, that will attract and hold a diverse and cross-generational audience. Some examples now of at-show experiential programming include such activities as a "color run," a day with Habitat for Humanity building a house or working with a parks department to clean up a local park.

Experiential Design is a future skill set that must be added to show teams. The outcome of this professional skill set is to help show management design and produce a show that is both an engaging experience and an experience that helps both attendees and exhibitors achieve their objectives for event participation and building loyalty to that show.

Research will be necessary to help an organizer determine what the experience design must be for a given show so the audience finds it engaging and rewarding. Researching, designing and then delivering outstanding experiences will be a growing challenge as audiences continue to change and the industry moves to the future.

16. Future Exhibition Industry Position in a Rapidly Expanding Digital World

The online and digital world is continuing its rapid expansion and will continue to do so into the foreseeable future. Exhibitor and event marketing budgets are increasingly expanding into more digital capabilities and service offerings. Bringing buyers and sellers together is no longer the sole province of the exhibition industry as e-commerce is bringing them together on a continuing 24/7 digital basis.

How will exhibitions fit into the digital world as it continues to rapidly expand? While not a complete answer, the Future Trends Task Force's assessment is that a show must build a high level of relevance to the market it serves. Building this relevance will require more marketing tools and capabilities than ever to build a successful show. It will also require generating the right mix of exhibitors as well as more on-target education programming and high quality networking opportunities to attract the right audience and build brand loyalty to that exhibition. To achieve this increased relevance, shows will need more research, data collection and data analysis to clearly demonstrate their contribution to the success of both exhibitors and attendees.

Attendee and exhibitor research will also be necessary to understand what attendees and exhibitors are seeking in an exhibition so the organizer can build that show for them. Appropriate data collection and analysis pre-show, at-show and post-show will help the show organizer plan the show as well as document the value of the exhibition and demonstrate attendee and exhibitor ROI.

The ability to create engaging events will increase in importance as a professional skill. This means developing the skills to translate research results into creative and marketing concepts that lead to the production of exhibitions and events that target the audience's value and is implicitly one that both exhibitors and attendees want to attend.

EXHIBIT I

PCI Security Requirements and Their Effect upon the Exhibitions and Events Industry

Most associations and companies within the meetings and exhibitions industry are well aware of the term "PCI" – the acronym which stands for Payment Card Industry, but is commonly used as reference to the PCI Data Security Standard (DSS). Since its inception in December 2004, organizations that process credit cards either a merchant or as a service provider have had a very specific set of requirements they must follow in order to continue to be able to process cards. To a large degree, these requirements are all solid security best practices that are both legitimate to follow and add a reasonable amount of overhead and cost.

The PCI DSS gets an update from time to time - always moving towards a broader and more specific set of requirements. In 2013, as part of PCI DSS 2.0, a Special Interest Group within the PCI security standards council released an e-commerce guideline supplement aimed at providing guidance to security assessors as well as merchants in regards to how e-commerce websites should be viewed within the context of PCI DSS. As the PCI DSS has continued to evolve to its now current 3.2 version, security assessors have continued to broaden their scope of purview to not only software and equipment that stores, processes, or transmits cardholder data, but also software and equipment that could affect the security of the cardholder data environment, even when it is not directly connected with that environment

What does this mean to the meetings industry? One good example is that websites that by themselves do not t process credit card information, such as registration, housing, or membership sites, but rather simply transfer the end user to a different website for processing (like PayPal or other third party software) will require the same level of computer code governance and security procedures that the payment sites require. This is a significant amount of control and security-related procedures.

For example, a payment site requires an extremely tight control on who has access to the code. The site must have a second developer review the code prior to publishing and it must have an independent third person actually publish the code. For the fast-paced world of agile website development that is commonplace within registration, housing, event sites, exhibitor sites, and the like, the overhead of this level of process governance is enormous and will result in significant cost increases to the industry.

It is important that businesses and associations understand the growing cost overhead that security requirements are continuing to add to the processing of credit cards. There are some processes involving credit cards that have historically been common place, such as swipes at onsite locations and storing card information for later usage (such as hotel reservations), which could become cost prohibitive as PCI security requirements continue to expand.

As the nature of risks and security requirements change, it is important to leverage your own IT staff, as well as external resources such as partners and vendors, to keep abreast of the changing landscape and how it will ultimately affect your business. The PCI DSS requires you to know what requirements are being managed by your staff and what requirements are being managed by your service providers.

History seems to indicate that it will only become more difficult and costly to do business in the same manner as we have in the past. To keep costs to a minimum, it may be necessary to find new ways to accept and process funds.

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