

Pro-AV Business Index

Released August 2017

The InfoComm International® monthly Pro-AV Business Index has been published since September 2016 gauging the sales and employment indicators for the pro-AV industry. The Index is calculated from a monthly survey tracking trends. Two diffusion indexes are created using this data, the AV Sales Index and AV Employment Index. The diffusion index is calculated based on the positive response frequency from those who indicated their business had 5 percent or more increases in billings/sales from the prior month plus half of the neutral response (an index of 50 indicates firms saw no increase or decline in the business activity, 50+ an increase, - 50 a decrease).

Summer Slowdown Persists

With its first look at the impact of summer, the survey found a slowdown is having a significant impact based on the monthly Sales/Billings Index, which registered a sharp drop to 50.9 in July from 57.7 in June. However, the score of 50.9 still reflects an overall increase in sales/billings from the previous month. The goal of the index is to continue to monitor the longitudinal business sentiment of the pro-AV industry and to analyze with other economic data once sufficient data has been gathered. The data has yet to complete a full cycle, which

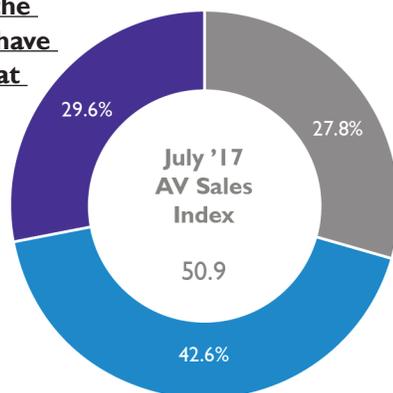
ideally encompasses two or three years, to see trends and patterns. It is also important to monitor the ongoing near-term business sentiment in relation to external factors such as the economy, political changes, and technological innovations that can impact the industry. On a positive note, more than half (55.2 percent) of the panelists indicate that their billings/sales have increased significantly, while another 25.7 percent say their business has been stable compared to the same period last year.

INDEX	JULY	JUNE	PERCENTAGE POINT CHANGE	TREND (MONTHS*)
Pro-AV Sales Index	50.9	57.7	-6.8	4
Pro-AV Employment Index	57.7	58.3	-0.6	2

*Months the index has been increasing or decreasing

Compared with the previous month, have the billings/sales at your location...

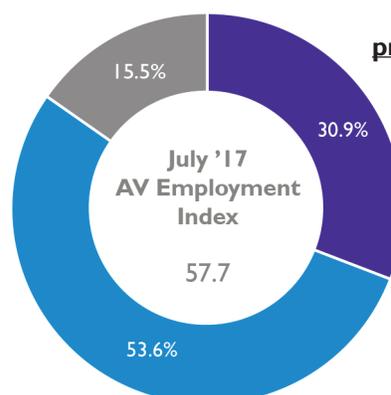
N-108



- Sales increased significantly (5% or more)
- Sales remained unchanged
- Sales decreased significantly (5% or more)

Compared with the previous month, is the overall employment at your location...

N-110



- Employment greater than last month
- Employment the same as last month
- Employment less than last month

The July 2017 AV business sentiment is at the lowest since the introduction of the Index last September. The current condition is temporary and not likely to continue, as the major reason for the slowdown — indicated by the panel — is a usual summer lull. Other reasons range from stronger competition leading to lower margins, to finding qualified staff to fulfill jobs. International companies saw less growth in July, especially those in the Asia-Pacific region. Some

firms are citing the new Goods and Services Tax (GST) that went into effect July 1 in India as a reason they saw a decrease in sales. While the new GST regime will simplify the sales tax system, the challenge for businesses has been the short time they had to prepare before the GST went into effect. In Europe, the typical holiday season summer slowdown is cited, as well as the continuing risk of other countries exiting the European Union.

- *“Due to GST implemented in the past month and a half, sales have decreased significantly. Our business is seeing a (hopefully) temporary impact due to rolling of a new tax system in India.”*
— Systems Integrator, Asia-Pacific

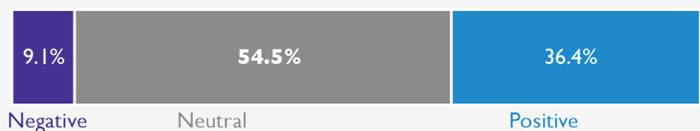
Overall, the North America market fared much better compared to international pro-AV businesses. While the summer slowdown has impacted some businesses, the only real concern among U.S. AV companies continues to be finding qualified staff.

- *“The summer lull has impacted both bookings and billings. We are seeing signs of recovery in August, but billings are down significantly based on work slowdown. Bookings have been soft, but are recovering this month.”*
— Systems Integrator, North America
- *“There is a serious shortage of CTS® staffing and qualified AV engineers. We are very short staffed in terms of installation and service techs. We try to recruit heavily in local tech colleges. Overall project closures remain below normal due to summer months.”*
— Systems Integrator, North America

Industry Conditions for Next Six Months

When looking at revenue for the next six months, half of Panel members remain positive while just under 40 percent remain neutral.

How would you assess the AV workforce conditions for your organization in the next 6 months?

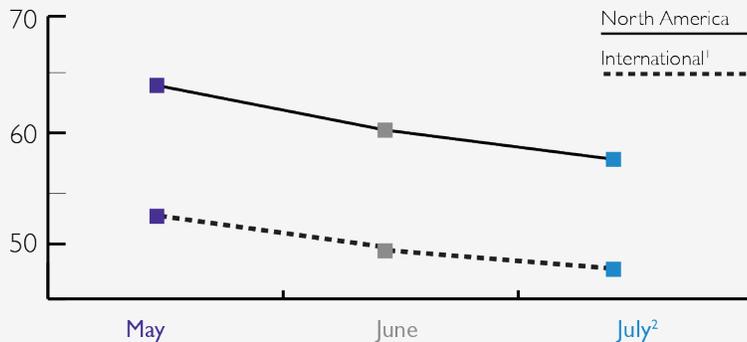


How would you assess your revenue/turnover conditions for your organization in the next 6 months?



International Outlook

The International Sales Index is showing an overall decline for July. As mentioned earlier, the international market for pro-AV products and services has seen slower growth during the past two months, with factors cited including the new tax rollout in India and the summer holiday season. The Sales Index for companies based in North America dropped slightly this month from 60.9 in June to 58.0².



Global regional indexes are three-month moving averages (based on prior, forward and current months) due to relative small sample size.

¹ International – regions include Europe, Latin America, Middle East/Africa, Asia-Pacific

² Due to the small sample, the North American and International indexes are based on a 3-month moving average. July 2017 index is preliminary, based on the average of May 2017 and June 2017 and will be final with August 2017 data in the next report.

Overall Business Sentiment Slows

Looking at other indicators that might suggest influences on the pro-AV industry, the latest American Institute of Architects (AIA) Consensus Construction Forecast is showing moderate growth (3.8 percent for 2017), but also a downgrade from the construction forecast that was put out at the beginning of the year. The original forecast estimated 5.6 percent growth for 2017 and 4.9 percent for 2018.

	FORECAST	
	% Change from 2016	
	2017	2018
Nonresidential Total	3.8	3.6
Commercial Total	8.8	4
Office	8.9	4
Retail & Other Commercial	10	4.6
Hotel	6.1	2.4
Industrial Total	-6.6	1.1
Institutional Total	3.5	4.1
Health	0.9	3.5
Education	4.9	4.8
Religious	-9.2	-1
Public Safety	1.4	3.7
Amusement & Recreation	7.1	3

Source: [2017 Consensus Construction Forecast](#), 2nd Half, The American Institute of Architects

According to AIA's Consensus Construction Forecast panel, construction spending so far in 2017 has been disappointing. At the beginning of 2017, construction forecasters were quite optimistic about the near-term outlook for the construction industry (see [January Pro-AV Business Index](#)). While growth remains, the original picture included factors such as federal fiscal policy that would provide more momentum, tax reform and financial deregulation that was going to release investment capital, and a trillion-dollar infrastructure program during the coming decade. This could have the same bearings on the pro-AV businesses as the growth outlook will be somewhat diluted.

However, as of the mid-year 2017 update, the U.S. has seen only about 2 percent growth during the first half of the year, and key elements of the new administration's legislative agenda have made

little progress. In addition, the business confidence sentiment measured by the Conference Board's [CEO business confidence survey](#) is currently at levels below those entering 2017.

The [Institute for Supply Management](#) also showed a slowdown in both the PMI (Purchasing Managers' Index), which is an indicator of the economic health of the manufacturing index, and NMI (Non-Manufacturing Index) business activities. The July NMI registered 53.9 percent, which is 3.5 percentage points lower than June's reading of 57.4 percent. In fact, the NMI panels' sentiment is similar to the AV sentiment on the summer slowdown. The July PMI registered 56.3 percent, a decrease of 1.5 percentage points from the June reading of 57.8 percent. The New Orders Index registered 60.4 percent, a decrease of 3.1 percentage points from the June reading of 63.5 percent.

Managing Projects Within Pro AV

Planning and managing an AV project takes skilled staff, collaboration and expertise in many fields, from engineering, to IT, to sales. Collaboration is the key to keeping a project on track and running efficiently. Having knowledgeable staff come together in the planning phase of the project is one of the most effective ways to maintain a successful project. This means bringing in everyone from consultants, to designers, to electricians at the beginning of an installation project. After the initial planning phase, keeping up the communication among all the team members can be a challenge but is crucial to run an efficient project. A key role is the project manager, who works in an agile environment and meets often with the team to go over current status, risks and scope changes to help keep the communication flowing and get ahead of unforeseen scope changes.

Panel members — both AV service providers and end users — were asked to select their top three attributes for project success, plus the top challenges they face in executing projects effectively. Both end users and providers said qualified staff, a knowledgeable project manager, and getting the whole team together from the start are the most important factors for a successful project. The only significant difference between the two groups is that providers

are more concerned about the client knowledge of the project, while the end user usually is the client. Communication between the provider and end user from the start and through the project can help educate the client as the project progresses. This disconnect between providers and end users can also be seen in the day to day challenges where 63 percent of end users versus 47 percent of providers listed communication as their number one biggest challenge.

Attributes for Success of Projects

	OVERALL	PROVIDER	END USER	GAP
Qualified technical staff on the project	66.9	68.2	63.3	4.9
Bringing the team together at the beginning of the project (e.g., architects, electricians, tech managers, etc.)	64.1	60.6	63.5	-2.9
Having a knowledgeable project manager on the project	57.5	56.1	61.2	-5.1
Client knowledge of the project	46.4	50.8	34.7	16.1
Proper documentation	41.4	39.4	46.9	-7.5
Knowledgeable and up to date on codes and standards	9.4	10.6	6.1	4.5

Biggest Day-to-Day Challenges Completing a Project

	OVERALL	PROVIDER	END USER	GAP
Poor communication	51.9	47.7	63.3	-15.6
Scope changes	47.0	46.2	49.0	-2.8
Finding qualified staff	42.5	43.2	40.8	2.4
Impossible deadlines	33.7	36.4	26.5	9.9
Staying within budget	31.5	32.6	28.6	4.0
Getting the whole team together at the start of the project	29.3	31.1	24.5	6.6
Understanding customers' needs	21.5	20.5	24.5	-4.0
Having to learn new technology	14.9	14.4	16.3	-1.9

What members are saying about their projects:

- “Knowledgeable technical staff is critical to a successful project. We hire qualified people in advance of projects and train them properly as best as we can. We overcame an important deadline with a dedicated staff willing to work around the clock to complete the project – nights and weekends included.”

– Systems Integrator, North America
- “Communications is the key for us to a successful project. After the awarding of a project, it became clear that the client did not understand the scope of the AV system design by the AV consultant. So, we conducted a workshop for the client and end users to give them a detailed overview of the proposed AV system and its functionality, so that when the AV system was completed and handed over, the client fully understood what the AV system could do and how they can use it.”

– Systems Integrator, Asia-Pacific
- “We address scope change drama by thoroughly documenting project scope and expectations at each stage of a project, with customer signing off the documentation. Then, if/when they come at us with changes in the scope or expectations of results, we can point to the signed approval of the detailed documentation. We will usually go ahead with the changes, but they will be provided via billable change order instead of a gratis update/redo.”

– Systems Integrator, North America

Pro-AV Business Index 2017, Historical Data

	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY
Pro-AV Sales Index	60.5	58.6	71.6	63.4	62.5	57.7	50.9
Pro-AV Employment Index	59.8	57.7	59.7	59.1	60.5	58.3	57.7

Methodology

The survey behind the InfoComm Pro-AV Business Index was fielded to 658 members of the InfoComm AV Intelligence Panel (AVIP) between July 26 and Aug. 4, 2017. A total of 189 AVIP members completed the survey. Only respondents who are service providers and said they were “moderately” to “extremely” familiar with their companies’ business conditions were factored in Index calculations. The AV Sales and AV Employment Indexes are computed as a diffusion index, with the monthly score calculated as the percentage of firms reporting a significant increase, plus half the percentage of firms reporting no change. Comparisons are always made to the previous month. Diffusion indexes, typically centered at a score of 50, are used frequently to measure change in economic activity. If an equal share of firms report an increase as report a decrease, the score for that month will be 50. A score above 50 indicates that firms in aggregate are reporting an increase in activity that month compared to the previous month, while a score below 50 indicates a decrease in activity. Any score above 50 indicates an increase in sales/billings.

About the InfoComm International AV Intelligence Panel

The InfoComm AV Intelligence Panel (AVIP) is a research community of industry volunteers willing to share their insights on a regular basis to create actionable information. Members of the panel are asked to participate in a short, two-to-three-minute monthly survey designed to gauge business sentiment and trends in the AV industry. Surveys may be taken via your phone or computer.

In return for their time and effort, InfoComm AV Intelligence Panel members will be eligible to:

- Earn points toward Amazon online gift cards
- Preview the survey results prior to public release
- Include select questions of their own in panel surveys

The InfoComm AV Intelligence Panel is designed to be a global community, representative of the entire commercial AV value chain. InfoComm invites AV integrators, consultants, manufacturers, distributors, resellers, live events professionals, and AV technology managers to get involved. If you would like to join the panel, enjoy benefits, and share your insights with the AV industry, please apply at infocomm.org/AVIP.