

Top 25 North American Supply Chain Graduate University Programs, 2018

Published: 17 August 2018 **ID:** G00367516

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As supply chain roles require more business and technology expertise and masters' level supply chain programs proliferate, a re-evaluation of university partnerships is a must. Supply chain leaders can use these rankings to identify the programs best equipped to help them recruit the right talent.

Key Findings

- Forty six universities were eligible to participate in the research. Within that group, the number of one-year or part-time master of science in supply chain management programs has grown 67% in two years; this year, we evaluated 30 programs. In 2016, there were 18. Supply chain M.B.A. program growth was flat.
- The average supply chain curriculum has grown in breadth and maintained strong technology and analytical content. Additional request for information detail indicates that there is healthy supply chain planning content across programs.
- Women account for 37% of the supply chain graduate student population and ethnic minorities count for 48%, meaning that graduates are more diverse on average than the supply chain organizations that want to hire them. This has major implications for companies' ability to attract and retain young professionals.

Recommendations

As a supply chain leader responsible for talent strategy, you should:

- Clarify your organization's skills level requirements with regard to technology, analytics and financial acumen to assess best program and candidate fit. Recalibrate salaries to match.
- Work with your program partners to ensure that customer experience, new product introduction and launch, the implications of digital disruption and global business are featured in their curricula as well as your internships and projects. As most programs move toward a common core of functional content, these will be differentiating areas.

- Fund M.S.S.C.M. degrees or supply chain M.B.A.s as a benefit for select current associates. Partner with programs that offer anytime, night and weekend classes and provide associates with enough schedule and location flexibility to ensure sufficient study time.

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Analysis

Got your elevator pitch ready? No, not you, new grads. I'm talking to you, senior supply chain leaders. What's your elevator pitch for the newest crop of advanced-degree-holding professionals? Graduates are entertaining multiple offers, or are expecting a promotion if they're already working. Three months post-graduation, they are 92% placed. So your pitch had better be good, and so

should your partnerships with supply chain university programs. But what is the process and criteria for identifying the right supply chain university partnerships?

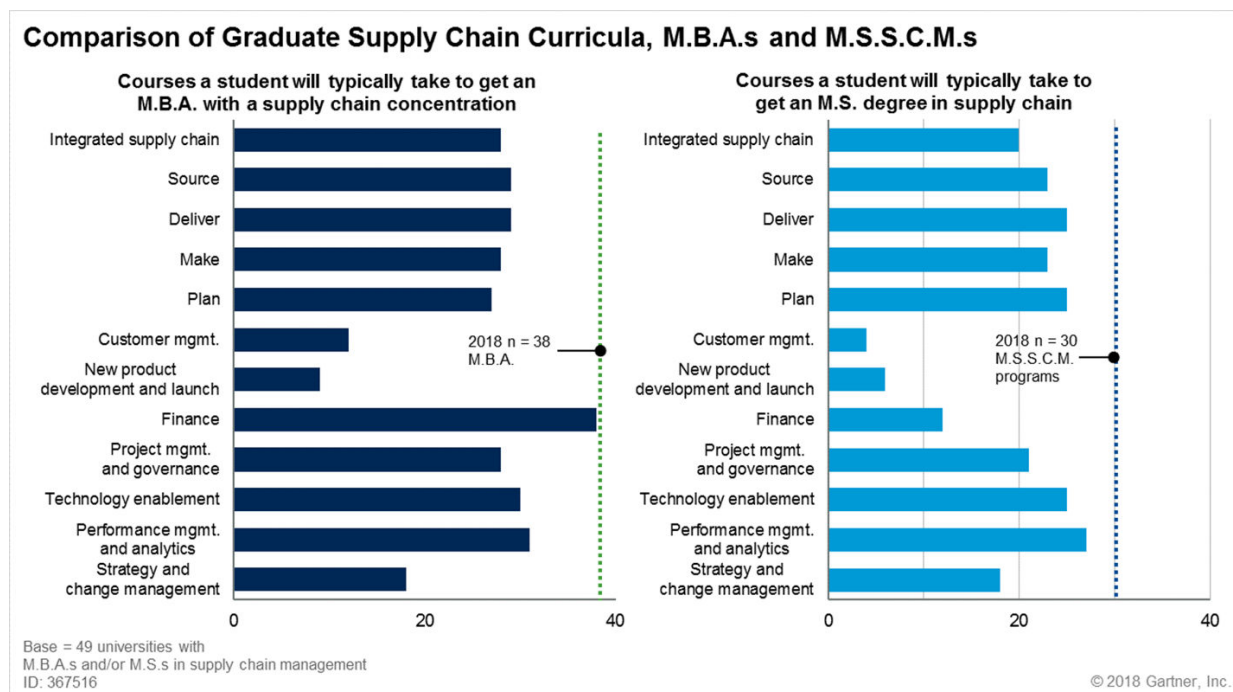
Gartner's 2018 Top 25 Supply Chain University Rankings highlight North American programs with the best curricula, real-world experience and industry reputations. Supply chain leaders can use this information to select the right portfolio of university partners that will strengthen early-career and experienced-hire pipelines.

Gartner research shows the typical supply chain skills profile is shifting toward a more analytical and technology-savvy business partner (see "Design a Talent Strategy to Support Algorithmic Supply Chain Planning"). Since 2014, we've seen 60% growth in technology skills needed for non-IT roles. The evolution of these roles warrants a periodic re-evaluation of university programs and partnerships by supply chain leaders. Gartner has committed to refreshing the rankings every two years to keep pace with these trends.

In 2008, the first year we published this analysis, we profiled roughly a dozen programs. For this year, our 10th anniversary, 67 universities in the U.S. and Canada responded to our request for information (RFI), with 46 offering research-eligible graduate-level supply chain programs. The number of participating master of science in supply chain management (M.S.S.C.M.) programs grew significantly, from 18 in 2016 to 30 in 2018, while the number of M.B.A. programs ticked up slightly, from 37 to 38. This growth provides some indication of the increasing need for supply chain professionals.

Figure 1 shows the types of courses undergraduates will typically take to get a supply chain M.B.A. or an M.S.S.C.M. degree. We use the Gartner Talent Attribute Model to map schools' curricula against 12 different focus areas: one foundational (finance), four enabling, six functional and one cross-functional (integrated supply chain, which Gartner calls the demand-driven supply chain) (see Figure 7 in the Methodology section).

Figure 1. Comparison of Graduate Supply Chain Curricula, M.B.A.s and M.S.S.C.M.s



Source: Gartner (August 2018)

Figure 1 shows that:

- Finance and accounting will be a feature of all M.B.A. programs, while for M.S.S.C.M. degrees less than half of the programs feature dedicated finance and accounting or supply chain finance courses.
- Customer management and new product development and launch, two strategic focus areas for today's high-maturity, high-performing supply chain organizations, are less commonly offered by both M.B.A. and M.S.S.C.M. programs.
- Most advanced degree programs provide exposure to these core functional areas: procurement, logistics and planning. M.B.A. students are more likely to study integrated, end-to-end supply chain and the manufacturing function than M.S.S.C.M. students.
- Technology and especially analytics are featured curriculum focus areas for both supply chain M.B.A.s and M.S.S.C.M. programs.

Most graduate students have at least some work experience. Depending on whether the degree program is a traditional full-time campus-based M.B.A. or M.S.S.C.M. program or a part-time program, the type and length of work experience varies widely. This year we evaluated hybrid programs for the first time: part-time programs that are conducted mostly online with some campus-based meet-ups, allowing large numbers of working professionals to get advanced degrees. In many of these programs, companies sponsor high-potential or management track employee participation.

The majority of programs offer applied supply chain project experiences for graduate students, doing real supply chain problem solving for companies and public-sector institutions. These may take the form of a capstone project, be supported through a student consulting group or be the focus of a class.

As for internships, 12 of 38 M.B.A. programs require them, as do just six of 30 M.S.S.C.M. programs. M.S.S.C.M. students are more likely to get their applied experience via project work in class or through consulting clubs.

2018 Graduate Program Rankings

Because we've seen so much proliferation of supply-chain-flavored M.B.A.s and M.S.S.C.M. programs, our graduate rankings feature more newcomers and upstarts than the "Top 25 North American Supply Chain Undergraduate University Programs, 2018." There were a few big movers, but most upward and downward movement was a one- or two-slot shift.

Improvement in curriculum or the emergence of a newcomer with strong curriculum was the main driver of program advancement in 2018. We also saw successful efforts by programs large and small to get the word out to industry practitioners in their networks. In 2018, we returned to the practice of a much more broadly circulated industry survey, promoted by the programs themselves (see the Methodology section). This helped many large programs cement leading positions and several upstarts improve theirs significantly over 2016.

Figure 2. Top 25 North American Supply Chain Graduate Program Ranking, 2018



Data for this research is gathered through surveys of academia and industry. The surveys are designed to identify industry sentiment and recruiting patterns, and to gather information on university program composition, including numbers of students and professors, as well as the scope of the curriculum. Three categories are evaluated, using the research methodology detailed in Figure 5, to determine comparative position. For a detailed explanation, please see the Methodology section.

Source: Gartner (August 2018)

Highlights

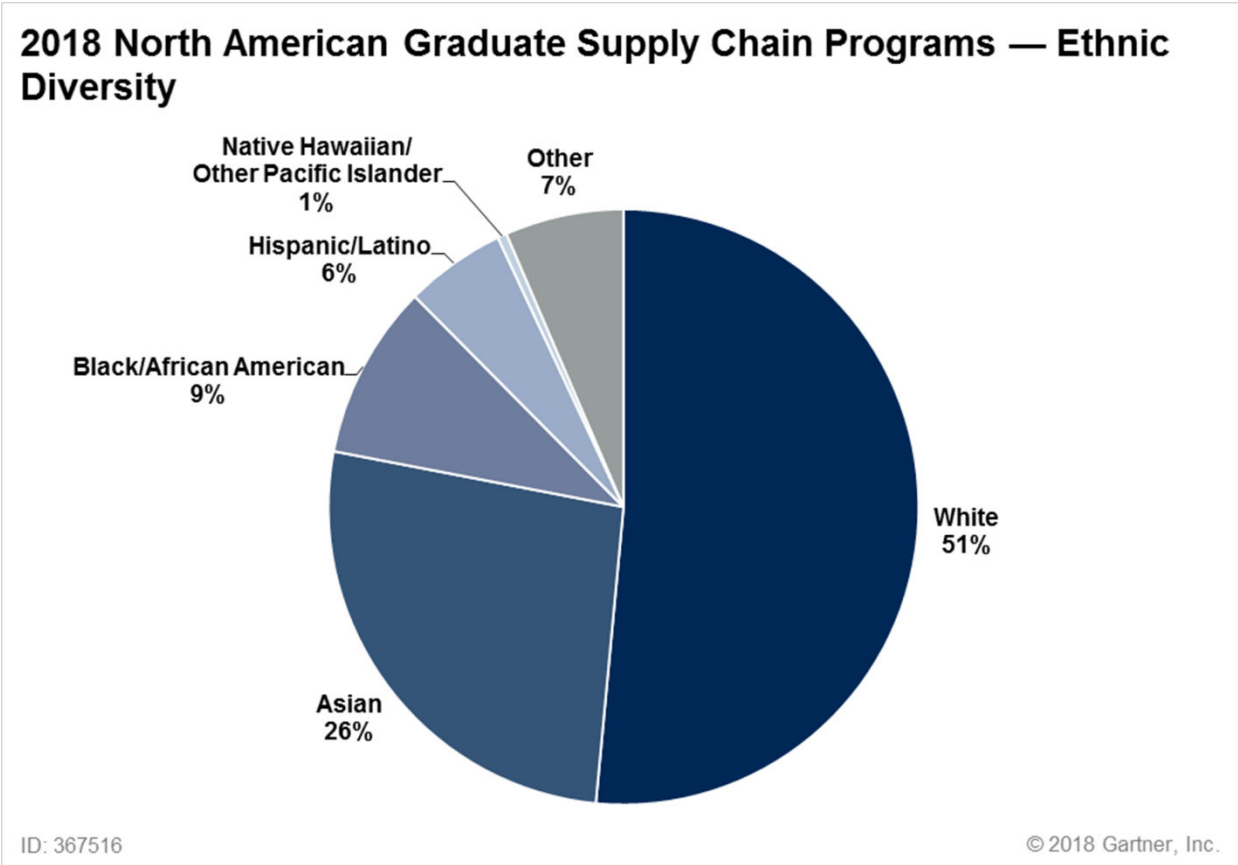
- Pennsylvania State University retains its No. 1 position, while the University of Michigan has moved up two spots to No. 2. Michigan advanced on the strength of its average starting salaries — \$120,000+ for its M.S.S.C.M. grads as well as its M.B.A. grads — and for doing everything well, at scale. Rutgers makes its debut in the top five at No. 5, having moved up two spots due to its excellent curriculum and ability to provide applied experience at scale. Rounding out the top five are the University of Tennessee and Michigan State University at No. 3 and No. 4, respectively.

- In its first year of eligibility for its supply chain M.B.A. concentration and its M.S.S.C.M. program, the University of Minnesota shot to No. 6 on strength of its curricula, applied experience, high average salaries and industry practitioner votes from its network.
- Other 2018 rookies include Wayne State University (No. 17), the University of Southern California (No. 18) and the University of Washington (No. 24).
- Two programs from the 2014 rankings return to the list in 2018: the University of Houston at No. 23 and the University of San Diego at No. 25.
- The biggest mover up the list was Northeastern University, up 11 places to No. 13. North Carolina State University advanced four places to No. 15. Other programs that improved their positions were Arizona State (No. 8), the University of Texas at Dallas (No. 9), Indiana University (No. 12), The Ohio State University (No. 14) and Howard University (No. 19).

Notable Trends

- Graduate supply chain curricula continue to expand. When measured against the 12-point Gartner Supply Chain Talent Attribute Model (see Figure 7), we saw the average M.B.A. curriculum expand from 7.2 to 8.0 points since 2016. The average M.S.S.C.M. curriculum expanded slightly from 7.2 to 7.4 points.
- Technology content has increased significantly in the past two years. Seventy-nine percent of M.B.A. programs and 83% of M.S.S.C.M. programs look at supply chain applications and tools as well as the broader role of technology in today's supply chains. This is a much improved showing over 2016, where fewer than half of supply chain M.B.A. programs and two-thirds of M.S.S.C.M. programs featured dedicated technology content.
- The average starting salary for M.B.A.s with a supply chain concentration is \$88,935, up from \$83,597 in 2016. The average starting salary for an M.S.S.C.M. is \$83,066, up from \$79,232. We're encouraged to see the M.S.S.C.M.'s average starting salary hold its value even with the significant increase in the number of programs.
- Across graduate programs, women account for about 37% of enrollment on average, men for about 63% and a very small percentage of students identify as gender nonconforming (0.11%). Female faculty make up 22% of full-time instructors on average, which has not changed since 2016. There are few women serving on university industry advisory boards.
- This year, for the first time we also asked for data on student and faculty ethnicity. In graduate programs, people of color account for 22% of full-time supply chain instructors on average, with women of color accounting for 5% on average. Student body ethnic diversity across 46 universities is broken down in Figure 3. Graduates are more diverse on average than the supply chain organizations that want to hire them.¹

Figure 3. 2018 North American Graduate Supply Chain Programs — Ethnic Diversity



Source: Gartner (August 2018)

Across supply chain graduate programs, fully one in three graduate students are international. While global companies can take advantage of this diversity, some companies and sectors will struggle to navigate candidate visa status or be prohibited from hiring them.

Figure 4 breaks down program performance in greater detail, highlighting some excellent programs that barely missed the cutoff for the graduate top 25. Program scope covers breadth of curriculum, industry value includes average starting salary, internship participation and industry reputation, and program size looks at the number of full-time faculty and full- and part-time undergraduate student enrollment.

Figure 4. Top North American Graduate Programs in Program Scope, Industry Value and Program Size, 2018

Top North American Graduate Programs in Program Scope, Industry Value and Program Size

Program Scope Leaders	Industry Value Leaders	Program Size Leaders
Pennsylvania State University	Pennsylvania State University	Pennsylvania State University
Syracuse University	Massachusetts Institute of Technology	HEC Montréal
Bowling Green State University	Michigan State University	University of Texas, Dallas
University of Texas, Dallas	University of Michigan	Arizona State University
University of Wisconsin, Madison	University of Minnesota	Georgia Institute of Technology
Rutgers University	University of Tennessee	Michigan State University
University of Houston	Arizona State University	The Ohio State University
University of Michigan	Rutgers University	Rutgers University
University of Tennessee	Purdue University	University of Maryland
Indiana University	University of Arkansas	University of Michigan
North Carolina State University	University of Southern California	University of Tennessee
Northeastern University	University of Texas, Austin	Massachusetts Institute of Technology
University of Minnesota	University of Wisconsin, Madison	University of Minnesota
	Wayne State University	Indiana University
		University of Southern California

- Highest Score in Category
- Second-Highest Score in Category
- Third-Highest Score in Category
- Fourth-Highest Score in Category
- Fifth-Highest Score in Category

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Source: Gartner (August 2018)

For program scope, where a diverse, balanced program based on the Gartner Supply Chain Talent Attribute Model received the highest marks, the top program was Penn State, followed by Syracuse. Bowling Green State University (Ohio), the University of Texas at Dallas and University of Wisconsin at Madison had the third-highest scores in this category.

Industry value leaders tend to have large, market-facing supply chain centers and strong partnerships with big companies; their graduates command premium salaries. This year, we see

Penn State again at the very top, followed closely by MIT and Michigan State scoring second highest, with Michigan, Minnesota and Tennessee scoring third highest.

Based on a combination of full-time faculty and the number of part-time and full-time students, the largest program is Penn State, followed by HEC Montreal and the University of Texas at Dallas. A slew of large public universities scored third highest: Arizona State, Georgia Tech, Michigan State, The Ohio State University, Rutgers, the University of Maryland, the University of Michigan and the University of Tennessee.

This is the first year where Penn State, alone, secured the highest score in each major category.

Internships have been core to our ranking since its inception, forming a key input to the industry value score, particularly at the undergraduate level. For graduate programs, because we are evaluating campus-based and hybrid full- and part-time programs where more students are working part or full time, we've altered the methodology slightly. We award points for required internships and co-ops, but also take into consideration other measures of real-world experience, including programs that require project work for companies as well as programs where students have more professional work experience prior to enrolling.

Figure 5. Supply Chain Graduate Programs With Required Internships, Required Client Projects or High Average Years of Experience, 2018

Supply Chain Graduate Programs With Required Internships, Required Client Projects or High Average Years of Experience, 2018			
Required Internship or Co-Op	Required Client Projects (M.B.A.)	Required Client Projects (M.S.S.C.M.)	High Average Years of Experience (7+)
M.B.A. Programs	M.B.A. Programs	M.S.S.C.M. Programs	M.B.A. Programs
Arizona State University	Arizona State University	Arizona State University	Howard University
Howard University	Georgia Institute of Technology	Case Western Reserve University	North Carolina A&T State University
Michigan State University	Howard University	Georgia Institute of Technology	North Carolina State University
Northeastern University	Indiana University	Loyola University Chicago	University of Arkansas
Rutgers University	Loyola University Chicago	Massachusetts Institute of Technology	University of Colorado
University of Arkansas	North Carolina A&T State University	Pennsylvania State University	University of Tennessee
University of Colorado	North Carolina State University	Purdue University	University of Wisconsin, Madison
University of Kansas	Rutgers University	Rensselaer Polytechnic Institute	
University of Michigan	Saint Louis University	Saint Louis University	M.S.S.C.M. Programs
University of South Carolina	The Ohio State University	Syracuse University	Michigan State University
University of Tennessee	University of Arkansas	Texas Christian University	Pennsylvania State University
University of Texas, Austin	University of Minnesota	The Ohio State University	Texas Christian University
	University of Pittsburgh	University of Colorado	University of Minnesota
M.S.S.C.M. Programs	University of San Diego	University of Houston	University of Southern California
Michigan State University	University of South Carolina	University of Minnesota	
University of Colorado	University of Tennessee	University of North Texas	
University of Michigan	Washington University, St. Louis	University of Pittsburgh	
University of North Texas		University of San Diego	
University of Tennessee		University of Southern California	
University of Texas, Dallas		University of Tennessee	
		University of Texas, Dallas	
		Washington University, St. Louis	

Source: Gartner (August 2018)

Methodology

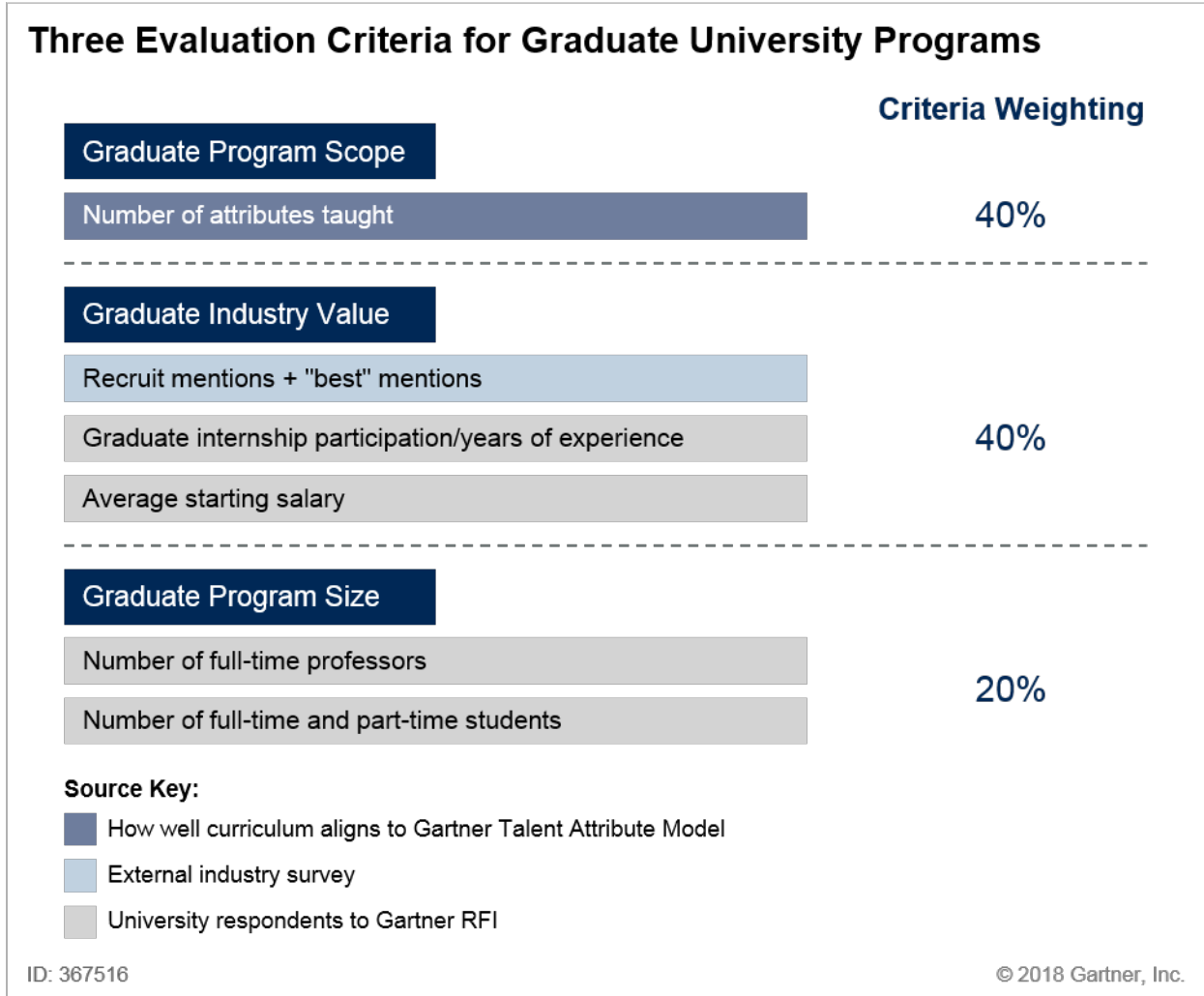
Gartner sent out individualized RFI links to 88 supply chain program contacts at universities in the U.S. and Canada. In total, 67 universities responded, 53 of which had graduate supply chain programs and provided complete RFI responses. Forty six of those universities offered eligible programs: delivered on-campus or in a hybrid on-campus/online format. We followed up with respondents where RFI responses were incomplete or unclear, and consulted university websites and course catalogs for additional information on program and course content. Responses and clarifications were collected throughout the spring of 2018.

The evaluation criteria for the programs appear in Figure 6. The final placement of university programs in our relative comparison is based on a composite score of three categories:

- Program scope
- Industry value
- Program size

Where programs tied, we looked at program scope and advanced the program with the higher score. Where programs were still tied on program scope, the program with the higher score for internships, project work and average years of experience was advanced.

Figure 6. Three Evaluation Criteria for Graduate University Programs

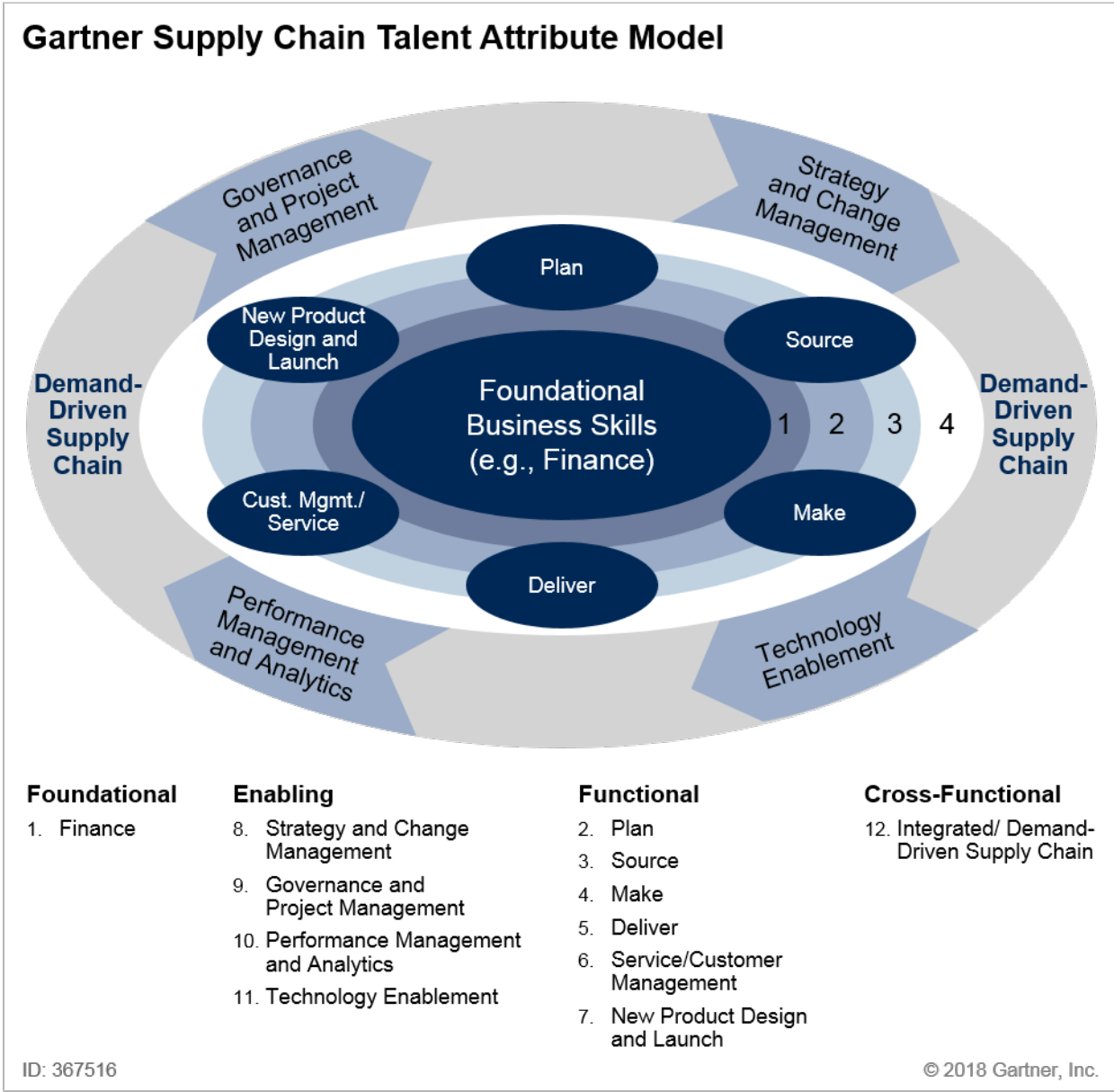


Source: Gartner (August 2018)

Criterion 1 – Program Scope

We framed the scope of supply chain with our Supply Chain Talent Attribute Model, which consists of 12 attributes: one foundational (finance), four enabling, six functional and one cross-functional (see Figure 7). As we evaluate programs, we look for well-rounded curricula since industry puts value on integrated understanding of global supply chains. We then assess "well-rounded" by comparing the curricula of programs against our Talent Attribute Model, which represents a wide variety of disciplines that prepare students for careers. The supply chain course score used for this component ranking is based on the courses listed in RFI responses and any publicly available course catalog data. Program scope is weighted at 40%.

Figure 7. Gartner Supply Chain Talent Attribute Model



Source: Gartner (August 2018)

Criterion 2 – Industry Value

Weighted at 40%, industry value has an industry-facing survey component and an internal component. In parallel with sending out surveys to the university programs, we also conduct a survey where we ask supply chain practitioners across sectors two simple questions: (1) In your professional opinion, what are the top five supply chain university programs? and (2) What are the top five supply chain programs your company recruits from? Points are accorded for each mention.

Links to the survey were distributed to all participating university programs as well as via Gartner client and community channels.

From the university-provided data, we add scores for average starting salary and applied experience, including required internships, required client projects and students' average years of experience prior to enrolling.

Criterion 3 — Program Size

The number of full- and part-time supply chain students as well as full-time faculty in the program provides quantification of a given university's ability to sustain a pipeline of supply chain recruits for industry. Even though the need for pure quality of recruits continues to be the primary theme as we talk to industry clients, they also consider volume, and so we continue to give program size a 20% weighting. We counted only full-time faculty engaged in classroom delivery of supply chain courses or research related to the supply chain program.

The data in this survey is from the 2016-2017 academic year and focuses on the state of campus-based and hybrid (campus-based plus online) graduate degree programs in the supply chain field.

This research does not address online-only programs or certificate-based executive education programs.

Universities Offering M.B.A. Programs With Supply Chain Concentrations

- Arizona State University
- Bowling Green State University
- Brigham Young University
- East Carolina University
- Georgia Institute of Technology
- Howard University
- Indiana University
- Lehigh University
- Loyola University Chicago
- Michigan State University
- North Carolina A&T State University
- North Carolina State University
- Northeastern University
- Pennsylvania State University
- Rutgers University

- Saint Louis University
- Syracuse University
- Texas Christian University
- The Ohio State University
- University of Arkansas
- University of Colorado
- University of Houston
- University of Kansas
- University of Maryland
- University of Michigan
- University of Minnesota
- University of Missouri, St. Louis
- University of North Texas
- University of Pittsburgh
- University of San Diego
- University of South Carolina
- University of Tennessee
- University of Texas, Austin
- University of Texas, Dallas
- University of Wisconsin, Madison
- Washington University, St. Louis
- Wayne State University
- Western Illinois University

Universities Offering M.S. in Supply Chain Management Programs

- Arizona State University
- Case Western Reserve University
- Georgia Institute of Technology (2X)
- HEC Montréal

- Loyola University Chicago
- Massachusetts Institute of Technology
- Michigan State University
- The Ohio State University
- Pennsylvania State University
- Purdue University
- Rensselaer Polytechnic Institute
- Rutgers University
- Syracuse University
- Texas Christian University
- The Ohio State University
- University of Colorado
- University of Houston
- University of Kansas
- University of Maryland
- University of Michigan
- University of Minnesota
- University of Pittsburgh
- University of San Diego
- University of Southern California (2X)
- University of Tennessee
- University of Texas, Dallas
- University of Washington
- Washington University, St. Louis

Universities Offering Ph.D. Programs in Supply Chain, Logistics and/or Operations Research

- Arizona State University
- Georgia Institute of Technology
- Georgia Southern University

- HEC Montréal
- Indiana University
- Massachusetts Institute of Technology
- Michigan State University
- Pennsylvania State University
- Rutgers University
- Saint Louis University
- Syracuse University
- University of Arkansas
- University of Houston
- University of Kansas
- University of Maryland
- University of Michigan
- University of Minnesota
- University of Missouri, St. Louis
- University of North Texas
- University of Pittsburgh
- University of South Carolina
- University of Tennessee
- University of Texas, Austin
- University of Texas, Dallas
- Washington University, St. Louis

Gartner Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

"Top 25 North American Supply Chain Undergraduate University Programs, 2018"

"Design a Talent Strategy to Support Algorithmic Supply Chain Planning"

"Map Your Supply Chain Future With the Supply Chain Talent Maturity Model (2.0)"

"Supply Chain Brief: How to Compete With Google and Apple for Supply Chain Talent"

"Research Guide to Gartner's Demand-Driven Model for Supply Chain Maturity"

"Supply Chain Maturity Assessment for Demand-Driven Supply Chain"

Evidence

This research is based on findings from the 2018 Gartner Supply Chain University Top 25 Survey, and the 2018 Gartner Supply Chain Industry Value University Survey. Please see the Methodology section for more information.

¹ Brookings Institution, "[Diversity Explosion: The Cultural Generation Gap Mapped](#)," 2015. U.S. Census Data: Percentage Non-White Population by Generation: Generation Z 49%, Millennials 44%, Generation X 40%, Boomers 28%. Median Age for Race Groups: Whites 42, Asians 35.4, Blacks 32.4, Native Americans 30.2, Hispanics, 2+ Races 19.9.

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