

Top 25 North American Supply Chain Undergraduate University Programs, 2018

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As supply chain skills profiles require more analytics and technology content, a re-evaluation of supply chain university partnerships is a must. Supply chain leaders can use these rankings to identify the university programs that are best equipped to help recruit and hire the right talent.

Key Findings

- The "classic core" across most programs has grown to include logistics, sourcing and procurement, planning, finance and analytics. More advanced undergraduate supply chain curricula have expanded to include customer service and new product development and launch, as well.
- A supply chain analytics focus is well established in most supply chain undergraduate programs, with 88% of programs offering courses and even analytics majors and minors.
- Women account for 41% of supply chain undergraduates, but only 22% of full-time faculty and very few advisory board positions. Undergraduate student populations are more ethnically diverse on average (34% are ethnic minorities) than the supply chain organizations that want to hire them.

Recommendations

Supply chain leaders responsible for talent strategy should:

- Improve their hiring profile by pulling together their organization's geographic focus, supply chain maturity, diversity and inclusion profile and vision, and career value prop prior to evaluating potential university program partnerships.
- Build a more influential presence, faster, by seriously considering second- and third-tier schools, as well as programs outside the top 25. You will have far greater influence on and access to students in these programs. Yesterday's underdog school could well be in tomorrow's top five (i.e., Rutgers and Auburn).

- Increase your company's credibility as an appealing place to work by refreshing your job profiles, highlighting development opportunities and improving flexibility to appeal to Gen Z college graduates.

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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 supply chain professionals, Gen Z digital citizens who command a 20% salary premium over average college grads? At graduation, three out of four have jobs; three months postgraduation they are 92% placed. Top students may have already accepted offers in the fall of their senior year (or earlier). So your pitch had better be good, and so should your partnerships with supply chain university programs. Which ones though?

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 ensure strong entry-level pipelines.

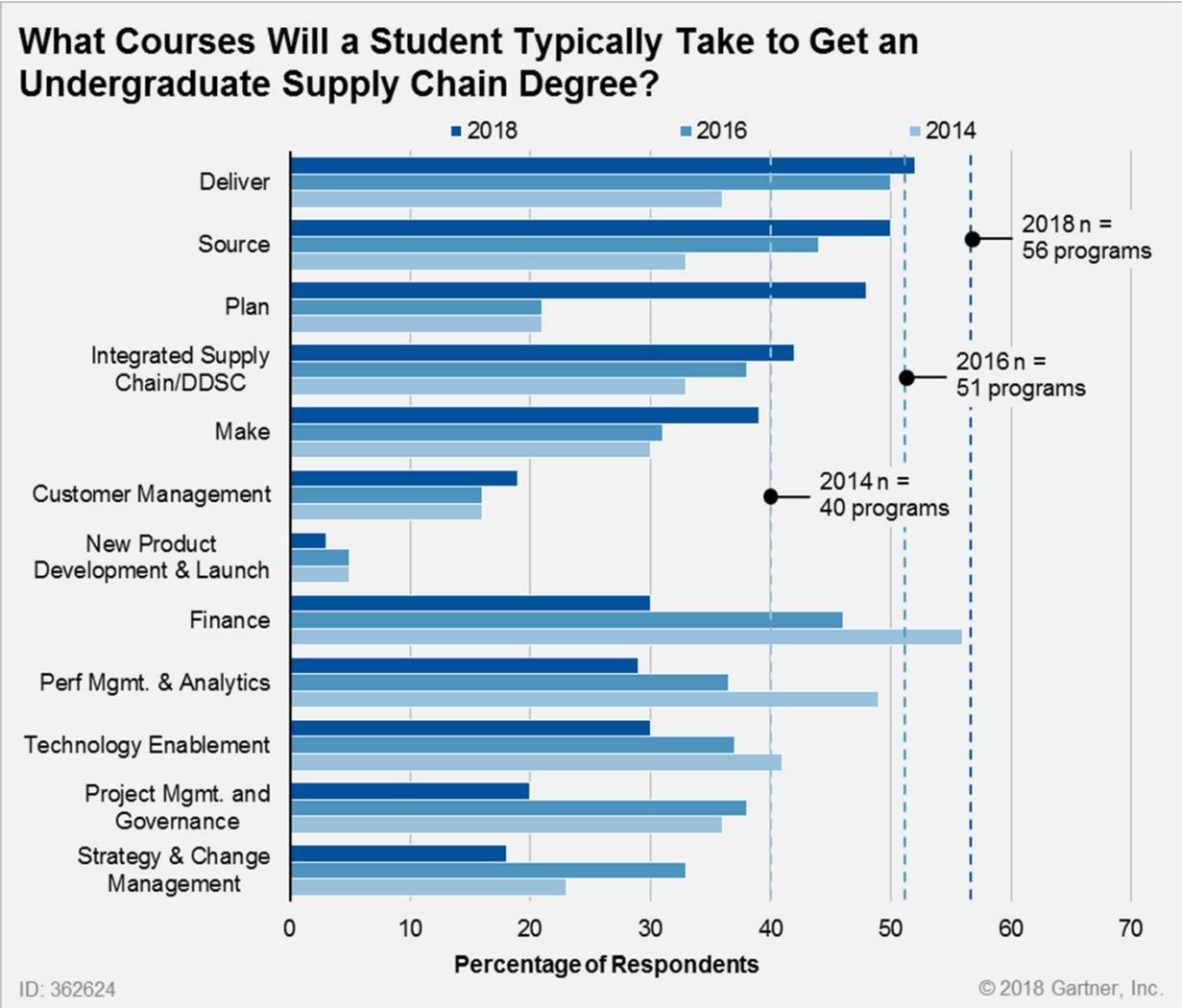
Because the typical supply chain skills profile is shifting toward a more analytical and technology-savvy business partner — since 2014, Gartner has seen 60% growth in technology skills needed for non-IT roles — periodic re-evaluation of university programs and partnerships is a must for supply chain 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 tenth anniversary, 67 universities in the U.S. and Canada responded to our request for information (RFI), with 56 reporting data for undergraduate supply chain programs. This 5x growth provides some indication of the increasing need for supply chain professionals. Dozens of universities changed the name of a longstanding logistics or operations research program while many added supply chain as a brand new major.

In addition to the proliferation of programs, the programs themselves are also growing in size. Even in the past two years, some larger programs have topped out on growth, but many established and relatively new programs continue to expand.

Figure 1 shows the types of courses undergraduates will typically take to get a supply chain 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 Undergraduate Supply Chain Curricula, 2018 vs. 2016 vs. 2014



Source: Gartner (June 2018)

Figure 1 shows a large jump in the number of programs that teach some aspect of supply chain planning (SCP), the core capability for high-performing supply chain organizations. Some of this growth is a result of more programs adding specific SCP courses, but much of it is due to a change in our RFI structure that helped us capture more course detail for each course listed. We conclude that most undergraduate programs (86%) expose students to some aspect of SCP, which, given the planning-centric nature of most serious supply chain challenges is a positive finding, especially when combined with the big focus on analytics.

In 2018, if you were to identify a common core across undergraduate programs, it would be logistics, sourcing and

procurement, planning, finance and analytics. Compare this to 2014, where the common themes were logistics and procurement, along with some burgeoning integrated supply chain content. We have come a long way even in just the past four years.

2018 Undergraduate Program Rankings

Our 2018 Top 25 undergraduate ranking lists familiar supply chain names — only two are brand new to the list, and even they are long-established regional players. What is new is relative positioning, with some significant shifts in the supply chain world order (see Figure 2).

Behind big shifts in position since 2016, we saw (1) major improvement in curricula causing a second or third-tier program to advance dramatically and (2) large increases in enrollment causing similar movements. We also saw successful efforts by programs large and small to get the word out to industry practitioners. In 2018, we returned to the practice of a much more broadly circulated industry survey, promoted by the programs themselves (see Methodology section). This helped many large programs cement leading positions and several upstarts improve theirs significantly.

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

Top 25 2018 North American Supply Chain Undergraduate Program Ranking					
1	Pennsylvania State University	↔	14	Texas Christian University	↑
2	Rutgers University	↑	15	University of Arkansas	↑
3	Auburn University	↑	16	Marquette University	↑
4	Michigan State University	↓	17	University of Houston	↑
5	University of Tennessee	↓	18	Syracuse University	↑
6	Arizona State University	↓	19	The Ohio State University	↓
7	The University of Texas, Austin	↑	20	University of North Texas	↓
8	Western Michigan University	↔	21	Bowling Green State University	↑
9	Georgia Institute of Technology	↓	22	Miami University	↑
10	Northeastern University	↑	23	The University of Texas, Dallas	↓
11	University of Minnesota	↑	24	Texas A&M University	↓
12	University of Wisconsin, Madison	↓	25	Wayne State University	↑
13	University of South Carolina	↓			

 = new entrant
  = same rank as 2016
  = advanced since 2016
  = dropped since 2016

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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 (June 2018)

Highlights

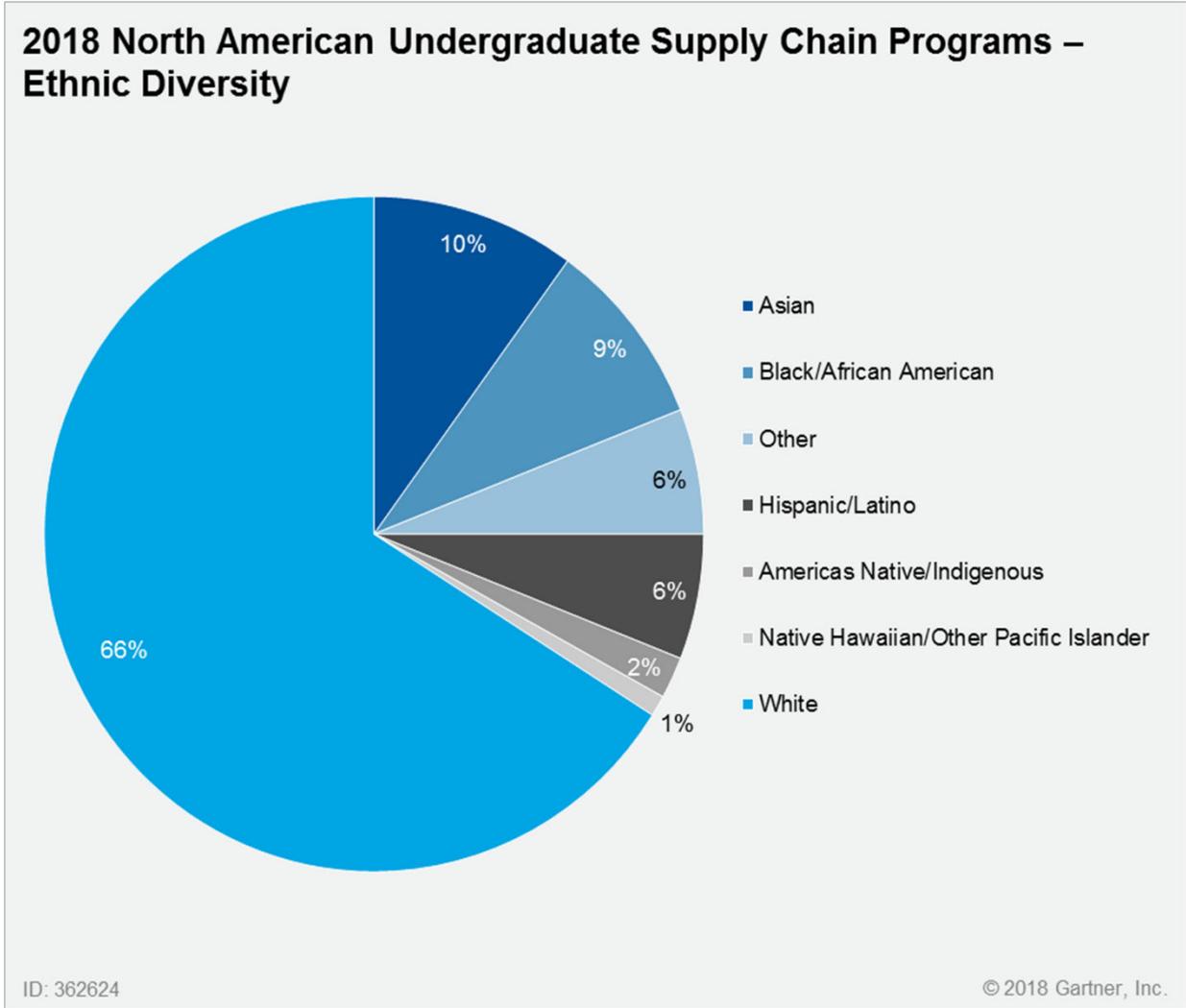
- Pennsylvania State retains the top position in the undergraduate ranking, with significant movement in the remaining top five slots. Rutgers moves up three to No. 2; upstart Auburn rockets to No. 3.
- By far, the biggest up-and-comer since 2016 was Auburn, up 14 spots, followed by the University of Minnesota (up 10 spots to No. 11), University of Texas Austin (up nine to No. 7) and Marquette University (up seven to No. 16). The University of Houston and Syracuse University both improved their standing by two spots, to No. 17 and No. 18, respectively.
- The most highly ranked "new" entrant in the undergraduate ranking is Northeastern University (No. 10), which had barely missed the top 25 in 2016 and had featured prominently in previous rankings. Other returnees to the undergraduate list after absences in 2016 are Texas Christian University (No. 14) and Miami University (Ohio) (No. 22).

- Two newcomers making the list for the first time in 2018 are Bowling Green State University (No. 21) and Wayne State University (No. 25).

Notable Trends

- The average undergraduate supply chain curriculum continues to expand to encompass an integrated definition of supply chain. When measured against the 12-point Gartner Supply Chain Talent Attribute Model (see Figure 7), we saw average curriculum expand from 8 to 8.2 points. The top 25 programs average a 9-point score.
- Analytics is a large and growing focus, with 88% of programs offering dedicated courses and content (up from 72%) in 2016. Three out of four programs feature formal course work in supply chain technology, about the same proportion as 2016.
- Across the 56 programs, women account for 41% of undergraduate enrollment on average, up just slightly from 2016. Female faculty make up 22% of full-time instructors on average, which has not changed since 2016.
- This year for the first time we also asked for data on student and faculty ethnicity. People of color account for 22% of full-time supply chain instructors on average, with women of color accounting for 6% on average. Student body ethnic diversity across 57 programs is broken down in Figure 3.

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



n = 57 programs reporting

Source: Gartner (June 2018)

- Georgia Tech has the highest undergraduate starting salary at \$75,000 — engineering-aligned programs command premiums over degree programs in business schools. Top students in any program will also command higher salaries than average. The average starting salary for undergraduates in 2018 was \$56,973, up from \$55,749 in 2016. The average starting salary for the top 10 undergraduate programs is \$61,654 up slightly from \$61,590 in 2016.
- Ninety-two percent of graduates are placed within three months of graduation, with 75% placed at or before graduation, about the same as 2016.

Figure 4 highlights more detail in our three main performance categories, including many excellent programs that barely missed the cutoff for the undergraduate 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 Undergraduate Programs in Program Scope, Industry Value and Program Size

Top North American Undergraduate Programs in Program Scope, Industry Value and Program Size		
Program Scope Leaders	Industry Value Leaders	Program Size Leaders
Auburn University	Michigan State University	Georgia Institute of Technology
Rider University	Pennsylvania State University	Rutgers University
Marquette University	Arizona State University	Pennsylvania State University
Rutgers University	Auburn University	University of Arkansas
Syracuse University	Georgia Institute of Technology	University of South Carolina
Texas Christian University	Rutgers University	Arizona State University
Pennsylvania State University	University of Texas, Austin	Georgia Southern University
University of Texas, Austin	University of Tennessee	Michigan State University
University of Houston	Western Michigan University	Northeastern University
University of Minnesota		The Ohio State University
University of Wisconsin, Madison		University of Tennessee
California State University, San Marcos		Iowa State University
Howard University		Miami University
Iowa State University		Texas A&M University
Miami University		Western Michigan University
Northeastern University		
University of Tennessee		
Western Michigan University		

Highest Score in Category
 Second-Highest Score in Category
 Third-Highest Score in Category

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Source: Gartner (June 2018)

For program scope, where a diverse, balanced curriculum scored against the Gartner Supply Chain Talent Attribute Model (see Figure 6) receives the highest marks, the top programs were:

- Auburn University
- Rider University
- Marquette University
- Rutgers University

- Syracuse University
- Texas Christian University
- Penn State
- University of Texas at Austin
- University of Houston
- University of Minnesota
- University of Wisconsin at Madison

Industry value leaders tend to have large supply chain centers and strong internship participation with big companies, great alumni networks and brand recognition — their graduates command premium starting salaries. This year, Michigan State was again at the top of this list, joined by Penn State. Arizona State had the second highest industry score, with Auburn, Georgia Tech, Rutgers, UT Austin, University of Tennessee and Western Michigan University scoring third highest for this category.

Undergraduate program growth has leveled off somewhat in 2018 compared to previous years. The big programs are still big, but they're also getting more competitive. We look at both the number of full-time faculty and the number of full- and part-time students for the undergraduate ranking. Based on these criteria, the largest programs are Georgia Tech, Rutgers, Penn State, University of Arkansas and the University of South Carolina.

Required internships are at the heart of our undergraduate research, based on supply chain client feedback first provided in the late 2000s. If a program doesn't have at least 75% internship participation (75% or more students interning prior to graduation), it's nearly impossible to be ranked in the top 25. Figure 5 lists programs that require internships or co-ops, as well as programs that put 90% or more of undergraduates through internships prior to graduation.

Figure 5. Top Schools for Internship or Co-Op Participation

Required Undergraduate Internship or Co-Op Participation	≥90% Undergraduate Internship Participation
Auburn University	Brigham Young University
Marquette University	Georgia Institute of Technology
Niagara College	Lehigh University
Northeastern University	Miami University
Rider University	Michigan State University
Rutgers University	Texas A&M University
Syracuse University	Texas Christian University
University of Texas, Austin	Texas Tech University
University of Texas, Dallas	University of Arkansas
University of North Texas	University of Illinois, Urbana-Champaign
University of Oklahoma	University of Minnesota
Western Michigan University	University of Tennessee
Western Washington University	University of Wisconsin, Madison
Western Illinois University	Washington University, St. Louis

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Source: Gartner (June 2018)

Methodology

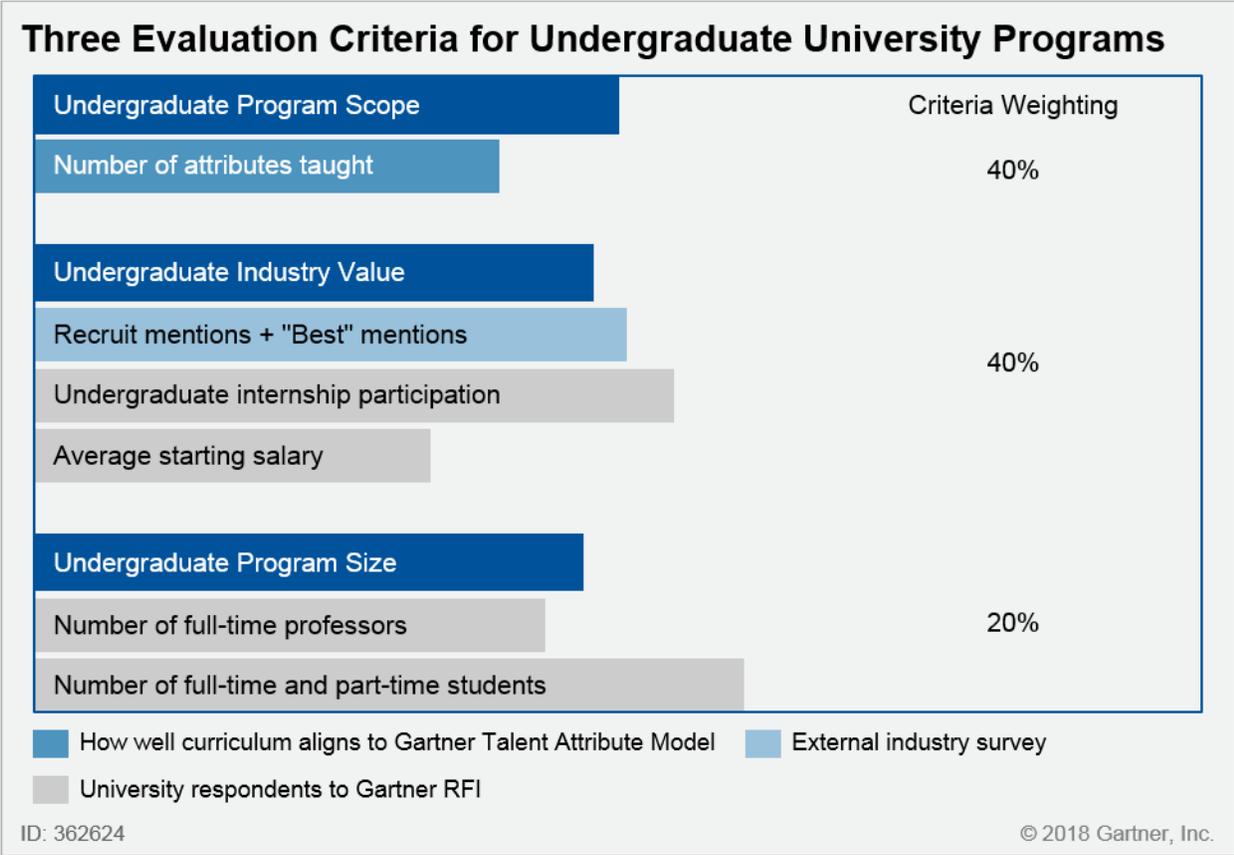
Gartner sent out individualized RF links to 88 supply chain program contacts at universities in the U.S. and Canada. In total, 71 universities responded, 56 of which had undergraduate supply chain programs and provided complete RFI responses. We followed up with respondents where RFI responses were incomplete 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 percentage of students participating in internships was advanced.

Figure 6. Three Evaluation Criteria for Undergraduate University Programs

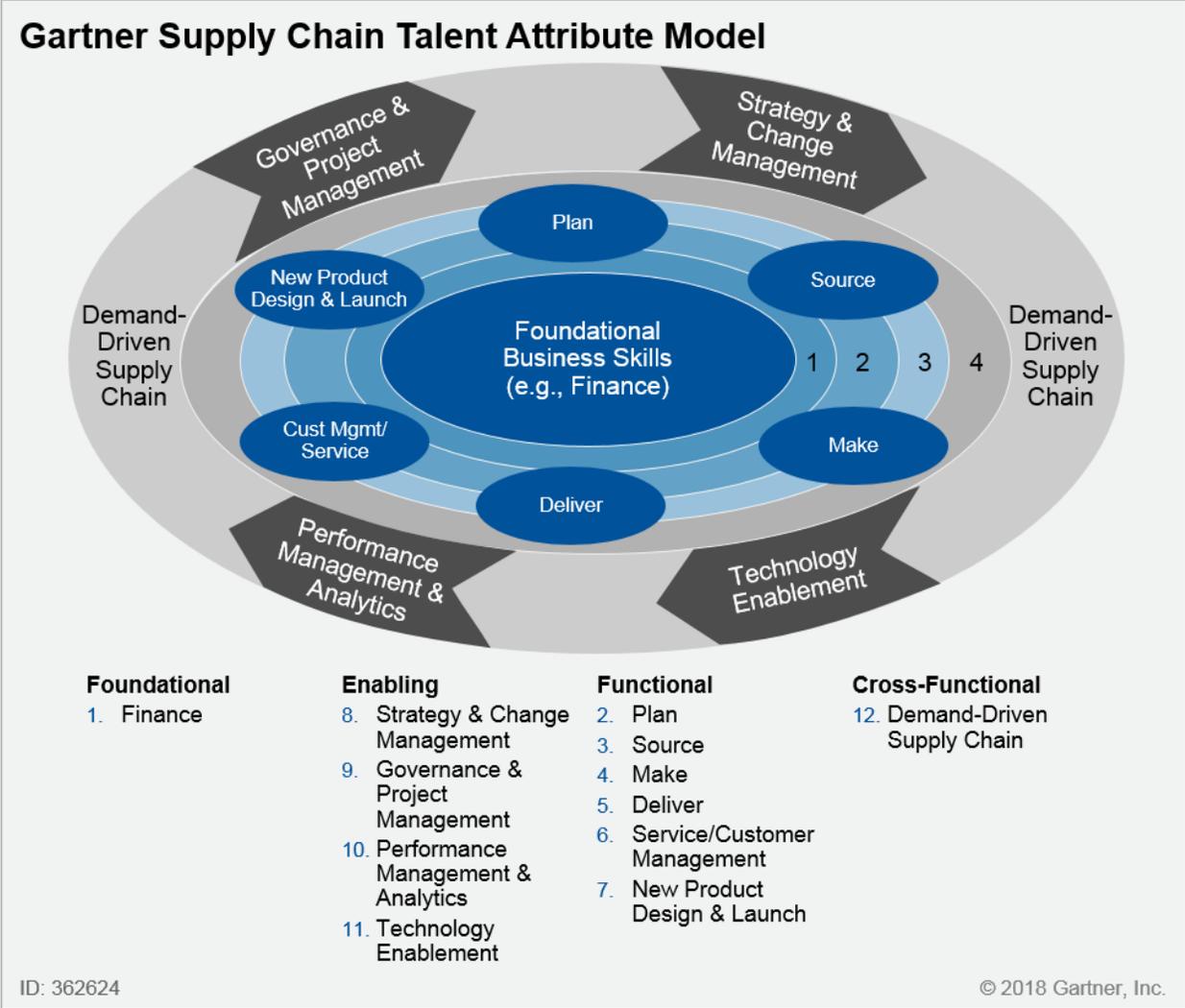


Source: Gartner (June 2018)

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 values broad, 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 (June 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 derive scores for average starting salary and internship participation. In our view, programs that require internships or have a high percentage of students

participating in internships are programs that are preparing students to solve real-world problems through real-world experience. Programs that require internships or co-ops receive the highest scores for this criterion, with programs accorded points on a sliding scale, depending on what percentage of their undergraduates participate in internships prior to graduation.

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.

Gartner Recommended Reading

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

"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"

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

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