CI State of Play:
Life Sciences 2018

Cipher

www.cipher-sys.com

+1 (410) 412-3326

185 Admiral Cochrane Dr. Suite 210 Annapolis, MD 21401

EXECUTIVE SUMMARY

At the start of 2018, Cipher Systems partnered with the College of Integrated Science and Engineering at James Madison University to conduct a first-of-its-kind comprehensive analysis of the state of Competitive Intelligence (CI) within the Life Sciences industry (i.e. pharmaceuticals, biotechnology, and medical devices). The purpose of this paper is to share our findings with the Life Sciences CI community and offer immediate recommendations for improving CI functions within any relevant company. As a result of the study, Cipher identified **five major insights** for CI in the Life Sciences:

- There are over 400 CI professionals in the top 300 Life Sciences companies, with Pfizer and Roche maintaining the largest and most mature CI teams in the industry, followed by Eli Lilly, Teva Pharma, and Regeneron
  - The top two CI teams, by size, employ an average of 48 professionals, the next three largest CI teams average at 13 professionals
  - The average CI team size across all top 300 organizations is two professionals

- Seven out of ten leading Life Sciences companies view CI as a strategic priority for their organizations

- Strategy and Marketing departments house 61% of CI professionals across the top 300 Life Sciences companies

- Among Life Sciences CI professionals, Business is the most prevalent Bachelor's degree, while Biology and Chemistry are the most prevalent industry-specific Bachelor's degrees

- The most effective use of a CI team is to actively integrate marketing, business analytics, pricing strategy, and innovation professionals into the company-wide strategic decision-making process

TABLE OF CONTENTS

BACKGROUND

Introduction to CI

Competitive Intelligence (CI) is the practice of gathering information about one's competitors in order to identify and assess competitor strategies and anticipate competitor actions. CI insights drive strategic and tactical decision making. CI capabilities are the main focus of this paper; however, during the course of our research, we found that many CI professionals in the Life Sciences industry had responsibilities extending into related intelligence disciplines. These included Market Intelligence (MI), which helps define the external operating environment through identifying patterns and trends in addition to other market dynamics, and Business Intelligence (BI), which uses internal data from within one's own operations and customer metrics to improve and optimize Key Performance Indicators (KPIs), such as profitability, utilization, operational efficiency, etc.

Methodology

In cooperation with the College of Integrated Science and Engineering at James Madison University, Cipher developed this study of CI professionals across the top 300 Life Sciences companies (i.e., the top 100 respectively in the pharma, biotech, and medical devices verticals). Top company rankings were based on last reported annual revenue. Undergraduate student researchers, in collaboration with Cipher's CI consulting team, compiled a list of the top companies, then gathered over 10,000 data points on CI professionals supporting these organizations by leveraging such publicly available information sources as LinkedIn, company web pages, and other online resources.

Cipher CI practitioners then analyzed the data, derived insights, and proposed actionable recommendations for competitive intelligence in the Life Sciences industry.

Overview of CI in Life Sciences

Figure 1 illustrates how Pharmaceutical, Biotechnology, and Medical Devices companies differ in their reliance on CI. The three verticals are divided almost equally into thirds.
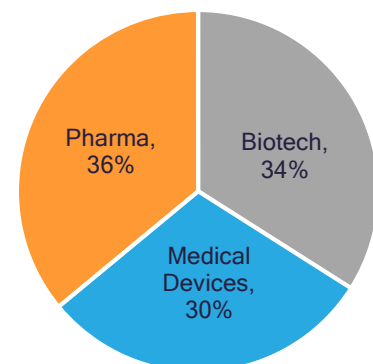

Figure 1: CI Professionals by Vertical

How is CI prioritized?

Our analysis has shown that CI is a core business activity, defined as being pivotal to an organization's functioning, for one-third of top Life Sciences companies. Moreover, 40% of all Senior and Executive leadership in the Life Sciences industry view CI as pivotal to their organization's core business functions.

Additionally, 70% of the top 300 Life Sciences companies evaluated consider CI one of several top priorities, with 69% of managers and company leaders in Life Sciences leveraging CI to support other priorities.
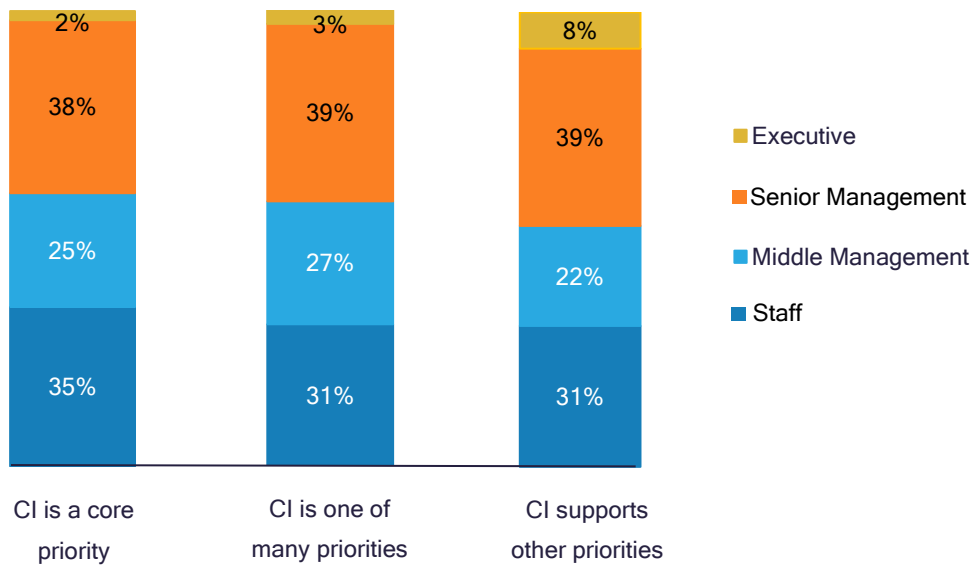
Figure 2: CI's level of importance within organizations

In terms of company functions leading CI efforts, Strategy and Marketing house the majority (61%) of CI professionals for all Life Sciences verticals.
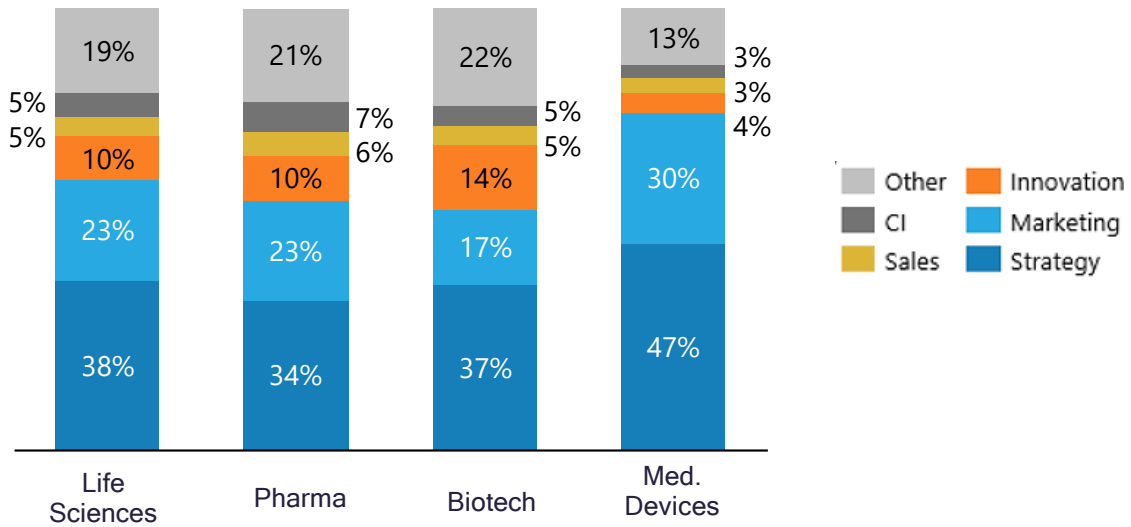
Figure 3: CI capability positioning within organizations

How is CI done?

Figure 4 shows the most commonly cited tools, sources, and skills necessary within the Life Sciences field based on our research on hundreds of CI professionals:

Figure 4: Most prevalent tools, methods, and skills for all Life Sciences CI professionals

A more specific look into how the pharmaceutical, biotechnology, and medical devices verticals perform intelligence functions showcases many more similarities than differences. The chart below depicts how an established CI team could differentiate, collect, and analyze information.
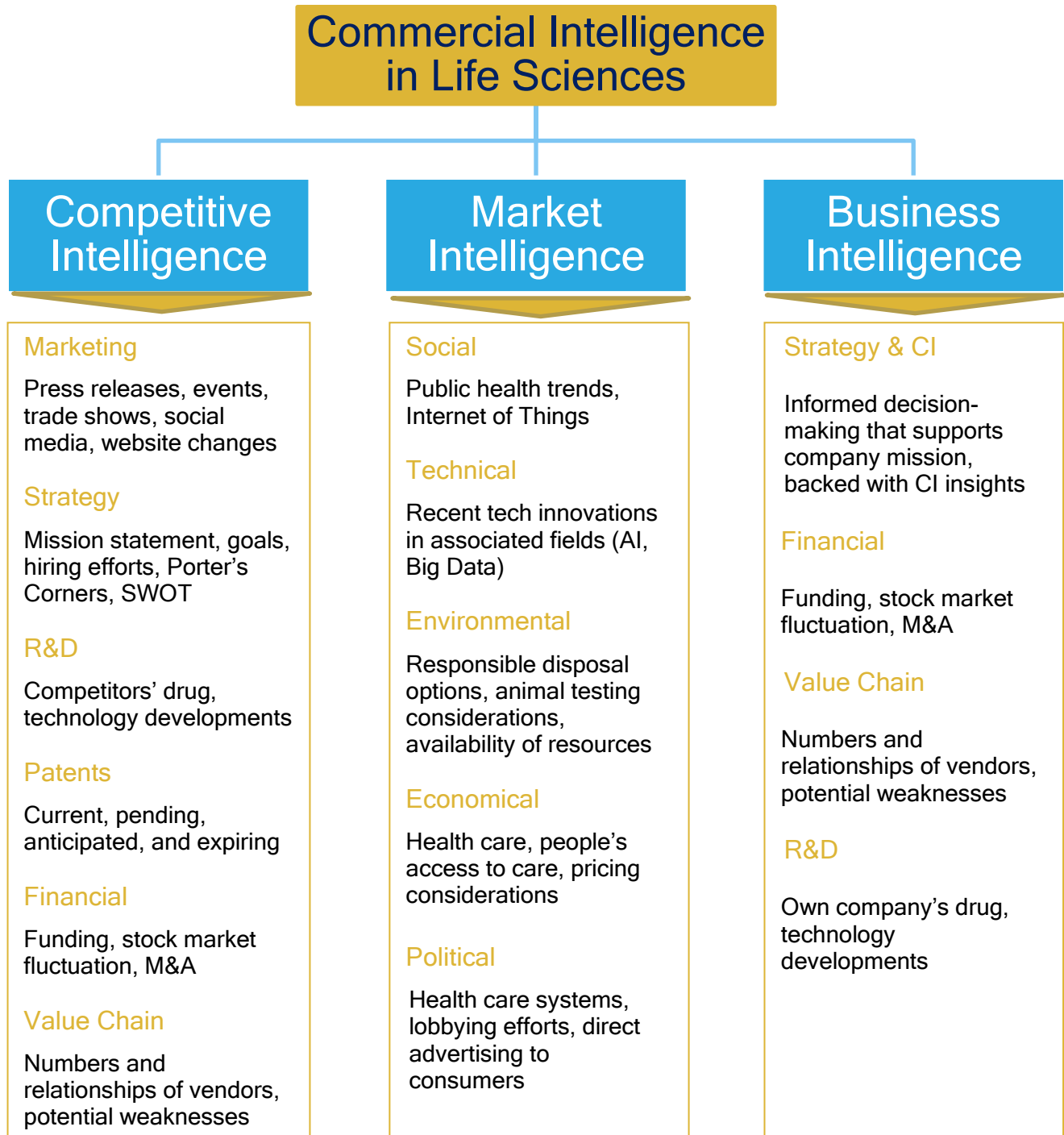
Commercial Intelligence in Life Sciences

Competitive Intelligence

Marketing

Press releases, events, trade shows, social media, website changes

Strategy

Mission statement, goals, hiring efforts, Porter's Corners, SWOT

R&D

Competitors' drug, technology developments

Patents

Current, pending, anticipated, and expiring

Financial

Funding, stock market fluctuation, M&A

Value Chain

Numbers and relationships of vendors, potential weaknesses

Market Intelligence

Social

Public health trends, Internet of Things

Technical

Recent tech innovations in associated fields (AI, Big Data)

Environmental

Responsible disposal options, animal testing considerations, availability of resources

Economical

Health care, people's access to care, pricing considerations

Political

Health care systems, lobbying efforts, direct advertising to consumers

Business Intelligence

Strategy & CI

Informed decision-making that supports company mission, backed with CI insights

Financial

Funding, stock market fluctuation, M&A

Value Chain

Numbers and relationships of vendors, potential weaknesses

R&D

Own company's drug, technology developments

Figure 5: Exemplary analytic methods and deliverables

CI ON THE MAP

CI hubs worldwide

Across the globe, the US leads the charge on CI in Life Sciences, with a significant number of hubs also in Europe and Asia. For the purpose of this study, a "CI hub" is defined as a geographic area with a high concentration of CI professionals employed by Life Sciences organizations. Within Europe, Switzerland, Germany, and the United Kingdom are home to the largest number of Life Sciences organizations with robust CI functions. In Asia, China leads the CI efforts among Life Sciences organizations, but by a much smaller margin than the standout countries in Europe. Japan, India, Thailand, and Singapore closely follow China. An opportunity also exists to develop this capability in Australia/Oceania, Latin America, and Africa, where there currently is a dearth of Life Sciences CI.

CI hubs in the US

The following map is a representation of the number of Life Sciences companies with established CI teams that are located in noted US metropolitan areas. The size of each bubble represents the relative hub size compared to other US metro areas and only areas with three or more established CI companies are represented. Furthermore, the coloring of each relevant state represents the relative concentration of CI-focused Life Sciences companies per state. California has the highest concentration, followed by New York.
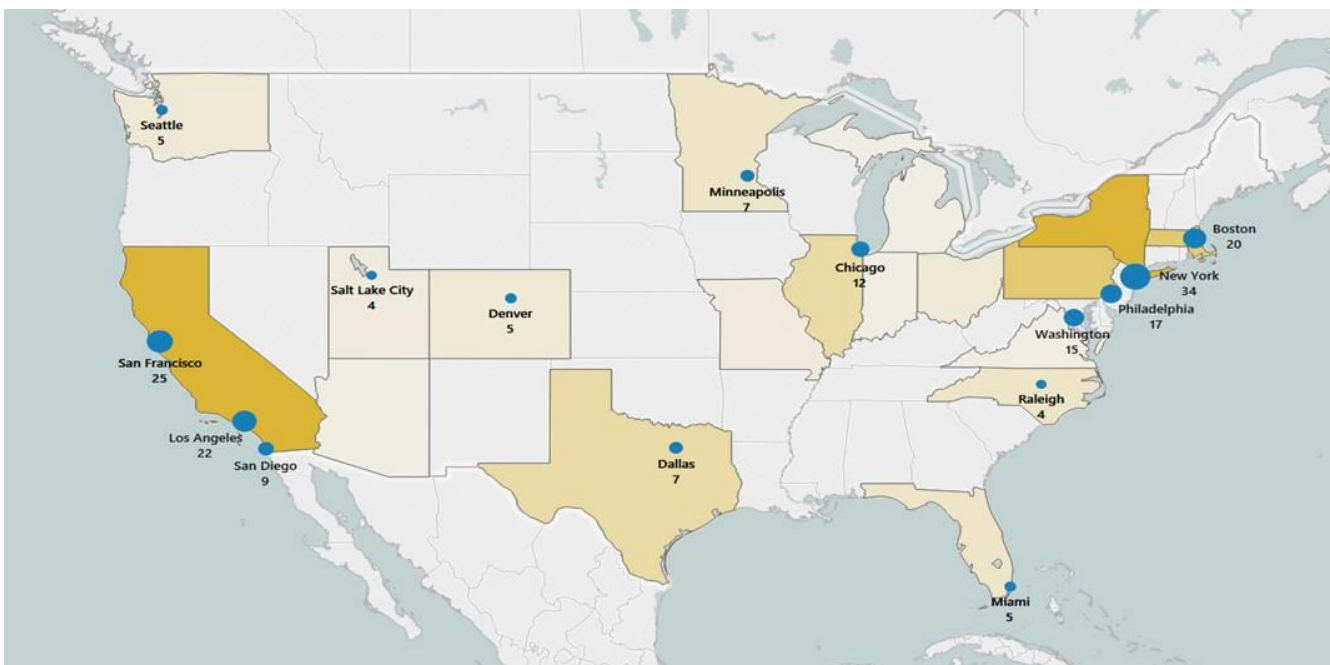

Figure 6: Concentrations of companies headquartered or with offices in the US that have CI teams of at least three employees

CI CAREER PATH

Education

Of the more than 400 individuals surveyed, 78% possess a Bachelor's degree and 21% have earned a Master's. Business Administration and Marketing composed 60% of graduate degrees, followed by Biology-related degrees at 13%. Among Life Sciences CI professionals, only 1% hold Ph.D.'s.
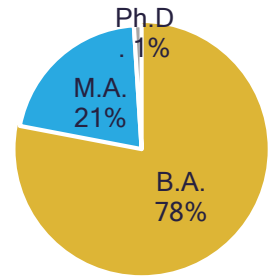
Figure 7: Degree breakdown of CI professionals

Business and Marketing degrees, both at Bachelor and Master levels, accounted for only 20% of the CI professionals' educational backgrounds. This indicates that current CI professionals studied other fields, entered the Life Sciences industry, and then specialized into CI.

Concentration is also indicated through graduate education: of the 216 professionals that sought graduate-level education, 60% pursued Business or Marketing fields.
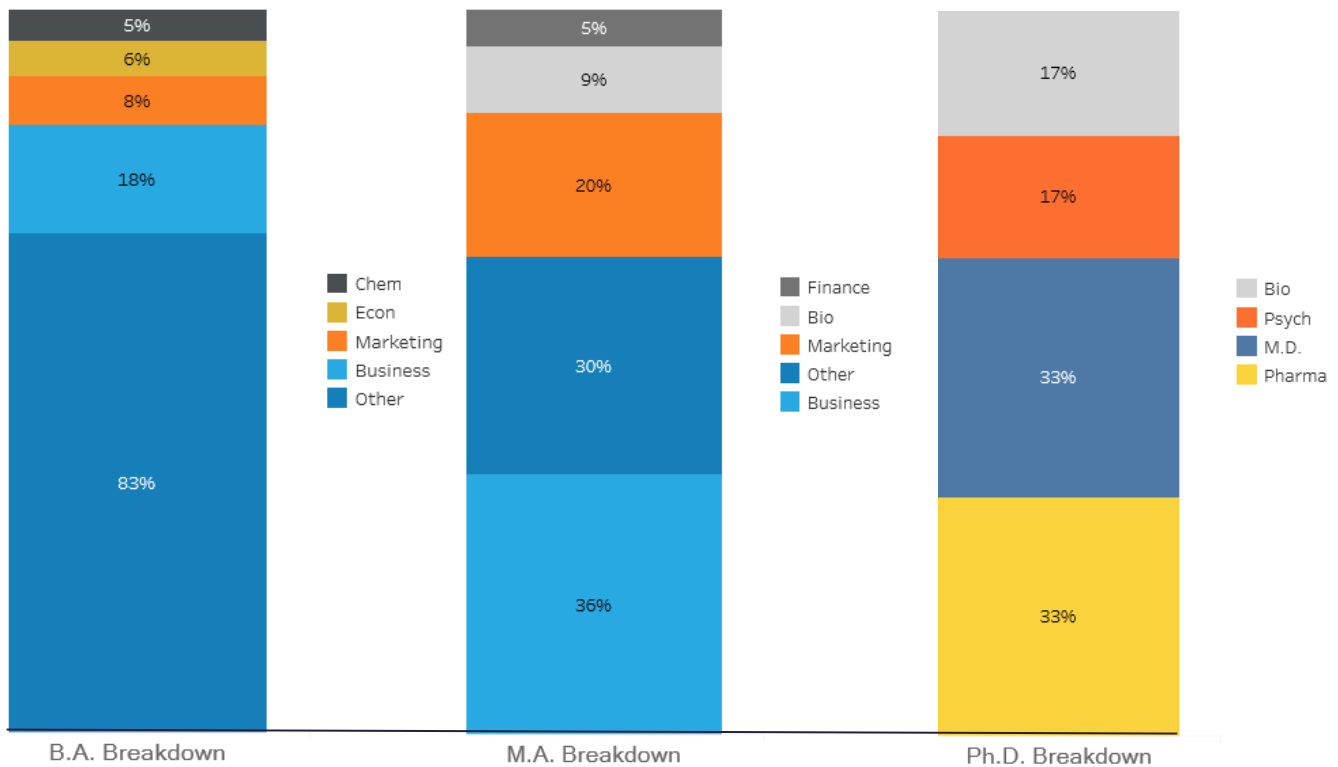
Figure 8: Breakdown of areas of study by degree level

In this study, there was no single school responsible for establishing a pipeline of CI professionals. As the sub-field of CI in Life Sciences is rapidly developing, universities are striving toward offering Business and/or Competitive Intelligence degrees or specializations. Life Sciences CI professionals call more than 250 higher education institutions their alma maters, with the largest number of current CI professionals having graduated from Rutgers, Stanford, Lehigh, Penn State, and Purdue universities.

Snapshot of CI professionals' career path

As illustrated in the graph below, CI professionals have a wide array of backgrounds, though some patterns are discernible. As part of our study, we examined the career paths of more than 700 CI professionals and discerned the following trends.
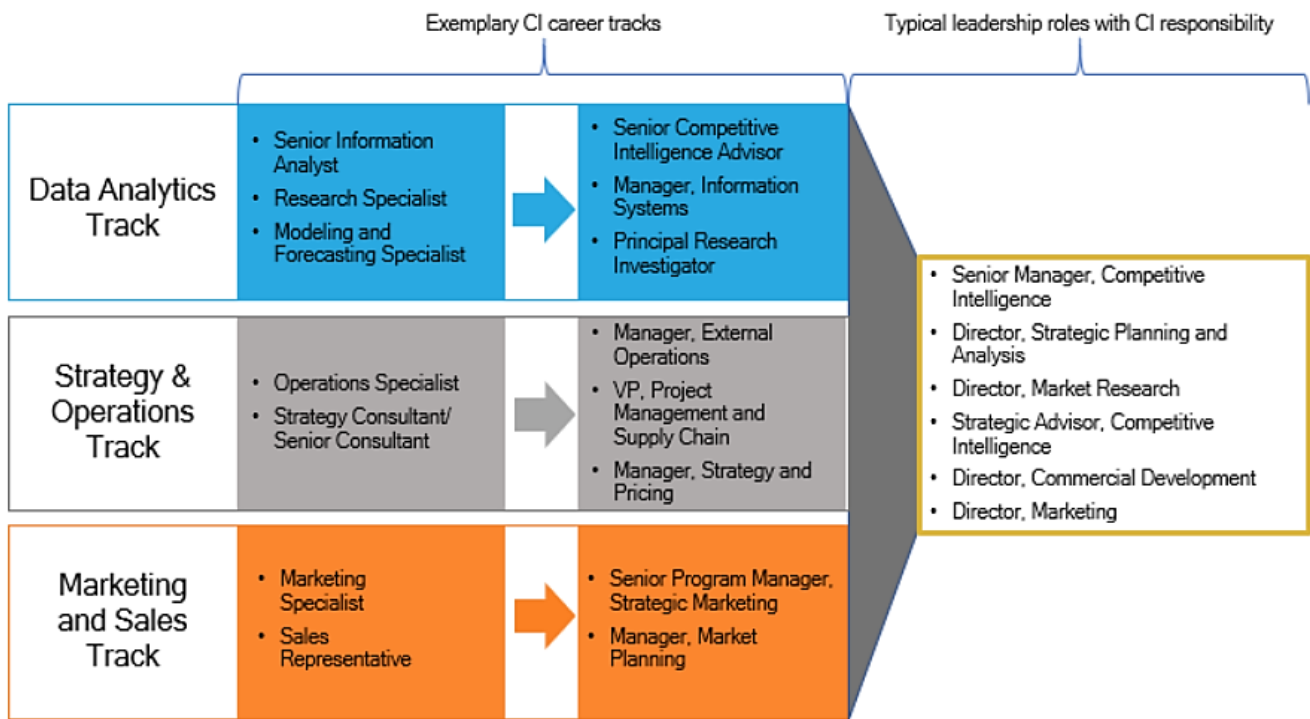

Figure 9: Career trends to leadership roles with CI oversight

Breakdown of CI responsibilities per career level

We cross-referenced the CI professionals' careers with current job postings to supplement what each step of the CI career path may entail.

	Common Job Titles	Common Responsibilities
Entry Level	• Marketing Analyst • Research Analyst • Competitive Intelligence Analyst	Technical benchmarking, win/loss analysis, analytical tools, PESTLE, Porter's Corners, SWOT, high level financial analysis, collection of day-to-day market events, competitor surveillance
Mid-Level	• Senior Analyst • Manager • Senior Manager	Forecasting capabilities, project management and organization, business development, strategy-oriented, report publication
Senior Level	Director or VP in: • Sales • Marketing • Intelligence • Logistics • Strategy • Data	Project oversight, communication of findings to key decision-makers

Figure 10: CI roles and responsibilities per career level

Professional certifications and memberships

Many CI professionals hold CI-specific certifications, which include:

- Competitive Intelligence Professionals
- Strategic and Competitive Intelligence Professionals
- Business Analytics
- Academy of Competitive Intelligence

To obtain CI-specific certifications, professionals must successfully complete several courses in a classroom, virtual, or hybrid setting.

Additionally, many surveyed CI professionals have LinkedIn group memberships related to pharmaceutical, biotechnology, and medical device marketing, development, and pricing. Specific groups include the Pharma Marketing and Advertising Group, Professionals in the Pharmaceutical and Biotech Industry, and Medical Device Networkers.

EVALUATION OF THE TOP LIFE SCIENCE CI TEAMS

Overview of leading CI teams

Based on our analysis of over 300 Life Science organizations, the companies depicted in the graphic to the right possess the largest and most robust CI teams. Four out of five of the top companies are categorized as pharmaceutical companies, whereas Eli Lilly operates in the biotechnology market. The top two CI teams, Pfizer and Roche, employ an average of 48 professionals; the next three average 13 professionals. Across all 300 organizations, most CI teams average two professionals.
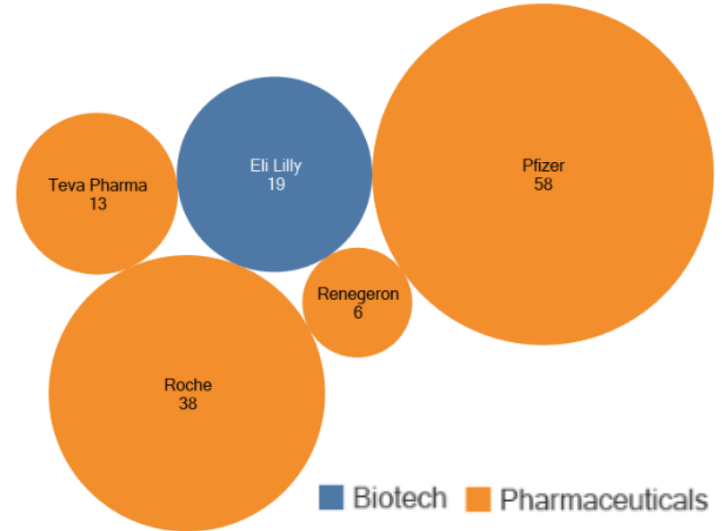

Figure 11: Largest CI teams by vertical

Surveyed employees of these companies were also more likely to state that CI/MI is a core focus to the company. When categorizing their function in the company, this sample was also more likely to use the categories "Strategy/Corporate Development/Business Development" and "Competitive Intelligence" when compared to other CI units.

Note that represented individuals are those with CI explicitly in their job title or description; however, other personnel across many departments also perform CI capabilities.

Breakdown of leading CI teams

No template exists for what the perfect CI team looks like. The top teams identified in this paper vary greatly when prioritizing the seniority level of their workforce.

Of the elite, Roche and Pfizer dominate the Life Sciences industry in terms of annual revenue, which could be contributed to, in part, to their commitment to implementing CI across all levels of their respective companies.
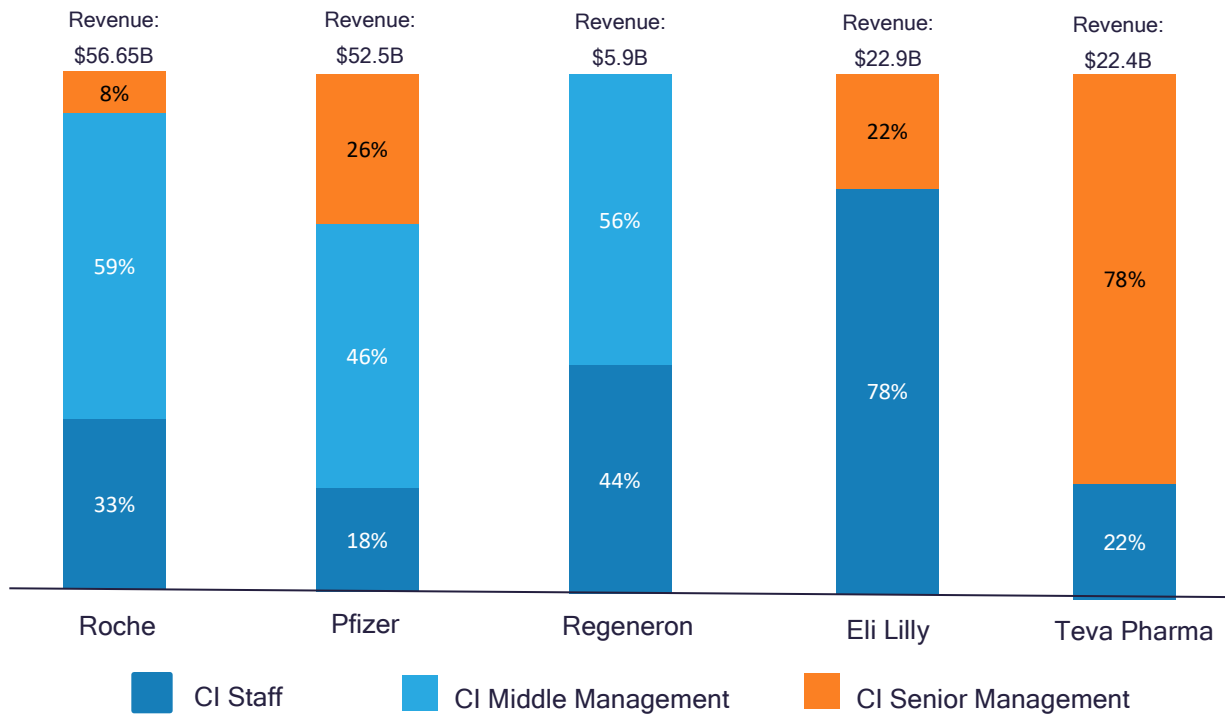

Figure 12: Breakdown of CI staff, compared to company annual revenue (as of 2017, in US $)

PUTTING THEORY INTO PRACTICE

How do I create my own CI team or improve the one I have?

Now that this paper has captured the current state of CI in Life Sciences, it is time to put this information to use for your organization. The quality of a company's information, analysis, and product means absolutely nothing if it is within a system that does not utilize it. Moreover, the fact that leading Life Sciences organizations invest heavily in CI underscores the importance they place on CI as an integral part of their strategic decision-making. Our evaluation of how a CI team's maturity may impact a Life Sciences organization's annual revenue suggests that CI analysis is more likely to positively impact the company's market positioning and revenue when a CI professional is part of the decision-making team, which is vital to keep in mind while building up your CI unit.

Recruiting the right people

As the field of CI in Life Sciences continues to grow, universities have begun offering Business and/or Competitive Intelligence degrees and/or specializations. While undergraduate and graduate degrees in CI are available from select colleges, those thrust areas are also often paired with or supplemented by business, marketing, security, or business analytics programs.

What do I need to consider when building a CI function?

1 Consumer and Application
- Start to practice the process of information gathering, validation, and analysis, report writing, dissemination of findings, and use of CI insights in strategic decision-making

2 Investment
- Identify individuals within your company with marketing, data analysis, and business analytics skills to organize a CI function that reaches into senior leadership

3 Sources
- Prioritize development of primary research techniques (sales analysis, customer interviews, and won/lost prospect discussion) while utilizing secondary research (public sources via the internet, press releases, etc.) to generate predictive analytics capabilities

4 Systems

- o Develop and utilize a knowledge management portal to allow for storage and sharing of intelligence documents to specific groups

5 Deliverables

- o Engage stakeholders across the entire organization using insights from product comparisons, win/loss data, predictive analyses, competitor profiles, strategic scenarios, war gaming analyses, etc.

THE CIPHER ADVANTAGE

What can you expect when working with Cipher?

	Market intelligence	We help clients *understand their markets* by identifying gaps, threats, and opportunities to develop strategies that maximize competitive advantage
	Competitor intelligence	We help clients *understand their competitors* through primary and secondary research and analysis designed to transform knowledge into more effective strategies
	Strategic advisory	We help clients *develop and refine their strategy* by reducing uncertainty associated with organic, acquisitive, and hybrid growth strategies
	Market entry	We help clients *identify and capitalize on new growth vectors* through market sizing, competitive landscape analysis, and strategy development
	Trend monitoring	We help clients *maintain a continuous in-depth understanding of their competitive environment* by instituting a system of tracking and monitoring mechanisms coupled with regular reporting and alerts
	CI as a Service	We help clients *cost-effectively optimize their intelligence and strategy functions* by providing highly-trained CI and strategy consultants who can integrate into clients' teams physically or virtually

As a leader in the competitive intelligence industry for more than 22 years, Cipher offers a variety of resources for companies at all stages of CI maturity. We provide best-in-class service and CI support, with a focus on actionable insights, to companies in every industry.

- **Not sure how to start with CI?** Cipher offers a wide range of advisory services to assess your competitive landscape and do the heavy lifting to build your CI function.
- **Is your CI unit struggling to separate noise from insights?** Cipher offers Knowledge360®, a state-of-the-art, intuitive CI platform that monitors your competitors and market and alerts you to changing conditions. Industry-leading machine learning algorithms filter information to bring you only the best results. Cipher clients report that 30-60% of their CI effort goes to data collection – Knowledge360® mitigates this hassle and helps your team focus on developing actionable insights.
- **Having trouble finding staff to assign to data analysis full-time?** We can augment your team using our blended approach to CI support that introduces your team to Knowledge360® and brings in our strategists to serve as an extension of your CI group.
- **Just need help getting started?** We are happy to conduct personalized workshops, helping your team get up to speed quickly and hit the ground running with CI!

Contact us today at info@cipher-sys.com or +1 (410) 412-3326 to discuss how Cipher can help you stay ahead of competition!