

[Table of Contents](#)

The \$16.9 million increase in research and development expenses was primarily due to a \$15.5 million increase in personnel costs associated with higher average headcount in fiscal year 2019 driven by the Cyence acquisition, as well as a \$2.6 million increase in web hosting costs incurred in order to support the development of our new products including our subscription offerings, to enhance our existing products, and to migrate our products to the cloud, partially offset by a decrease of \$1.2 million in professional services costs.

Our research and development headcount was 724 as of July 31, 2019 compared with 749 as of July 31, 2018. Average headcount during fiscal year 2019, however, increased by 54 as compared to average headcount during fiscal year 2018, primarily due to the Cyence acquisition that closed on November 1, 2017, which resulted in increased personnel costs, despite the decrease in headcount as of the end of fiscal year 2019 versus the end of fiscal year 2018.

We expect our research and development expenses to increase in absolute dollars as we continue to hire and dedicate internal resources to developing, improving, and expanding the functionality of our solutions and migrating our solutions to the cloud. Research and development expenses may also increase if we pursue additional acquisitions.

Sales and Marketing

Our sales and marketing expenses primarily consist of personnel costs for our sales and marketing employees. It also includes travel expenses, professional services for marketing activities, and amortization of certain acquired intangibles.

The \$6.6 million increase in sales and marketing expenses was primarily due to increases of \$14.2 million in personnel expenses due to higher headcount to sell our products and \$1.4 million due to the amortization of intangible assets, partially offset by a decrease of \$9.4 million due to the change in accounting for commission costs under ASC 606. Under ASC 606, certain commissions are capitalized when earned and expensed over the anticipated period of time that goods and services are expected to be provided to a customer, which we estimate to be approximately five years.

Our sales and marketing headcount was 354 as of July 31, 2019 compared with 329 as of July 31, 2018.

We expect our sales and marketing expenses to continue to increase in absolute dollars as we continue to invest in sales and marketing activities to support our business growth and objectives.

General and Administrative

Our general and administrative expenses include executive, finance, human resources, legal, and corporate development and strategy functions, and primarily consist of personnel costs, as well as professional services.

The \$1.5 million decrease in our general and administrative expenses was primarily attributable to a decrease in professional services of \$10.2 million, partially offset by increases of \$6.1 million in personnel expenses due to higher headcount and \$2.5 million in software and cloud infrastructure costs to support our growth. Professional services were higher in the prior year period as a result of professional services incurred in connection with our acquisition of Cyence and implementation costs of a new enterprise resource planning platform and a new product configuration and quoting system.

Our general and administrative headcount was 298 as of July 31, 2019 compared with 255 as of July 31, 2018. General and administrative headcount includes personnel in information technology support, information security, and facilities, which are allocated across all functional departments.

We expect that our general and administrative expenses will increase in absolute dollars as we continue to invest in personnel, corporate infrastructure, and systems required to support our strategic initiatives, the growth of our business, and our compliance and reporting obligations.

Other Income (Expense)

	Fiscal years ended July 31,		Change	
	2019	2018		
	Amount	Amount	(\$)	(%)
(In thousands, except percentages)				
Interest income	\$ 30,182	\$ 13,281	16,901	127
Interest expense	\$ (17,334)	\$ (6,442)	(10,892)	169
Other income (expense), net	\$ (1,867)	\$ 509	(2,376)	(467)

Interest Income

Interest income represents interest earned on our cash, cash equivalents, and investments.