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**Invesco**

# Accessing Innovation: Moving Beyond Market-Cap

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# Accessing Innovation: Moving beyond market-cap

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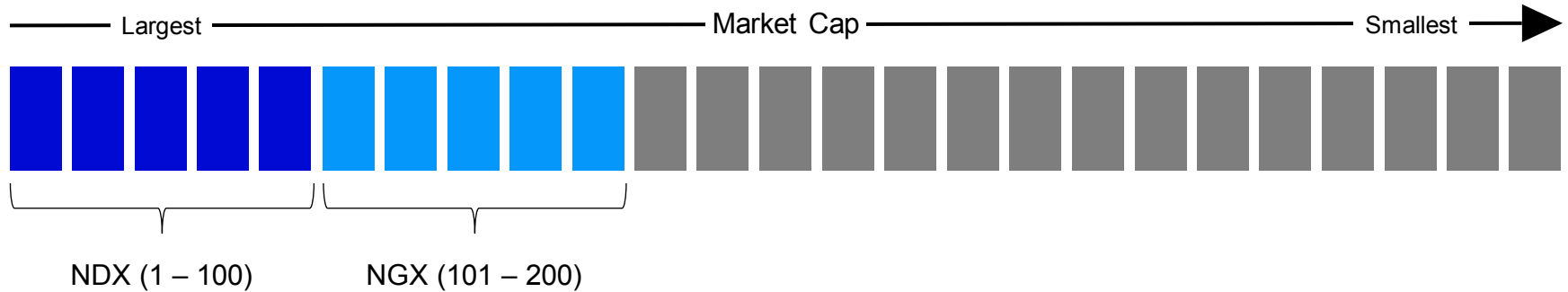
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# Overview

- Nasdaq-100 Index (NDX)
- Nasdaq Next Generation 100 Index (NGX)

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## Nasdaq Listed Non-financial Companies



For illustration purposes only.

## **Not all innovation is created equal.**

Consider a process that has a long track record of providing...

**1** Commitment to innovation through Research & Development

**2** Increased patent activity from higher R&D spend

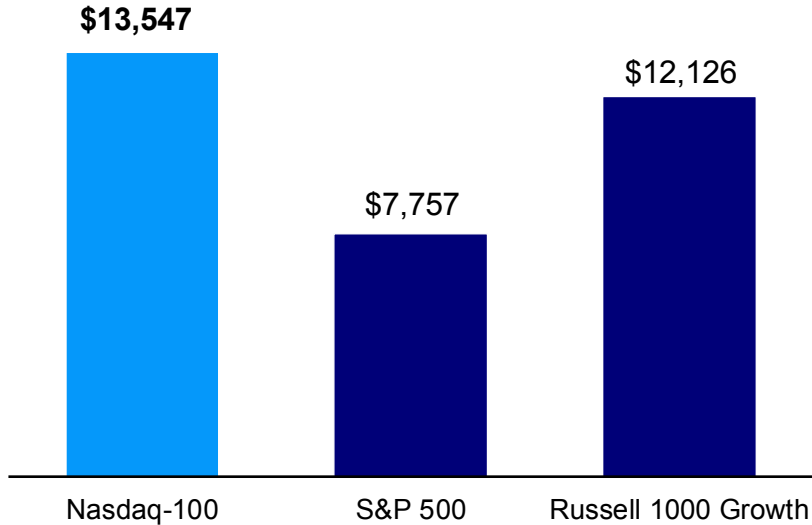
**3** Higher fundamental growth vs. the market

**4** Outperformance potential

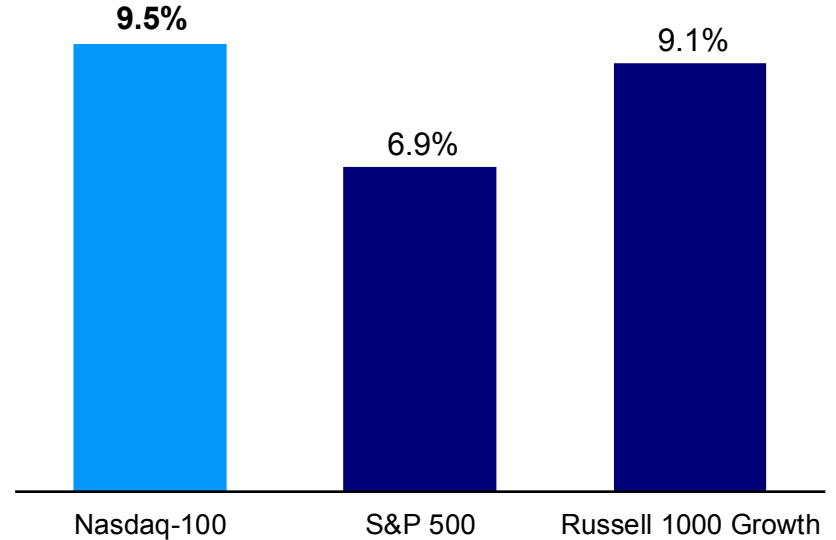
# 1

## Commitment to innovation through research and development *Nasdaq-100 Index*

Average weighted R&D spend (\$M)



R&D spend as % of sales



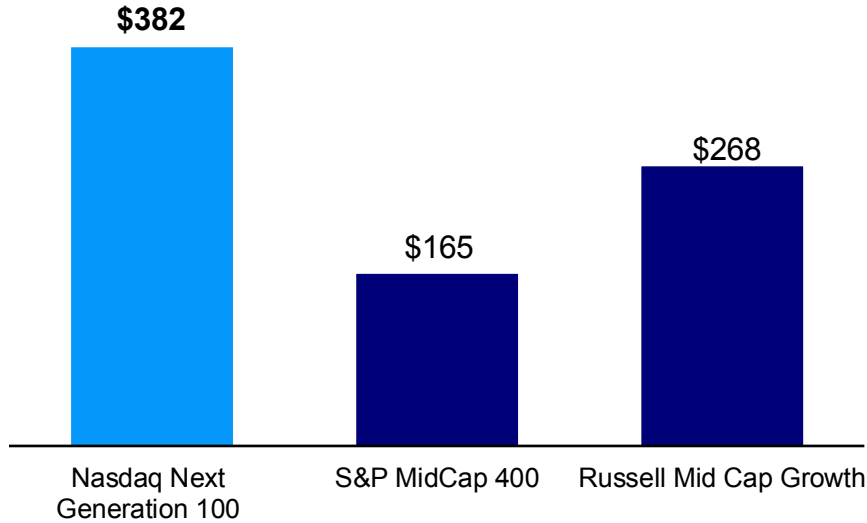
Source: Bloomberg L.P., as of 3/31/2022. Most current data available. Average weighted R&D is a market cap weighted value R&D for each index while R&D Reinvestment Rate equals R&D divided by sales for a given year. An investor cannot invest directly in an index. The Russell 1000® Growth Index measures the performance of the large-cap growth segment of the US equity universe.

**1**

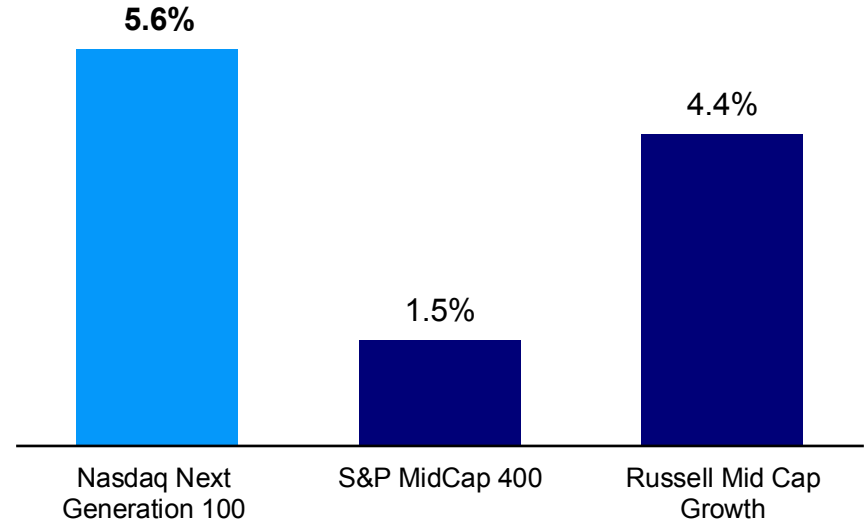
# Commitment to innovation through research and development

## Nasdaq Next Generation 100 Index

Average weighted R&D spend (\$M)



R&D spend as % of sales

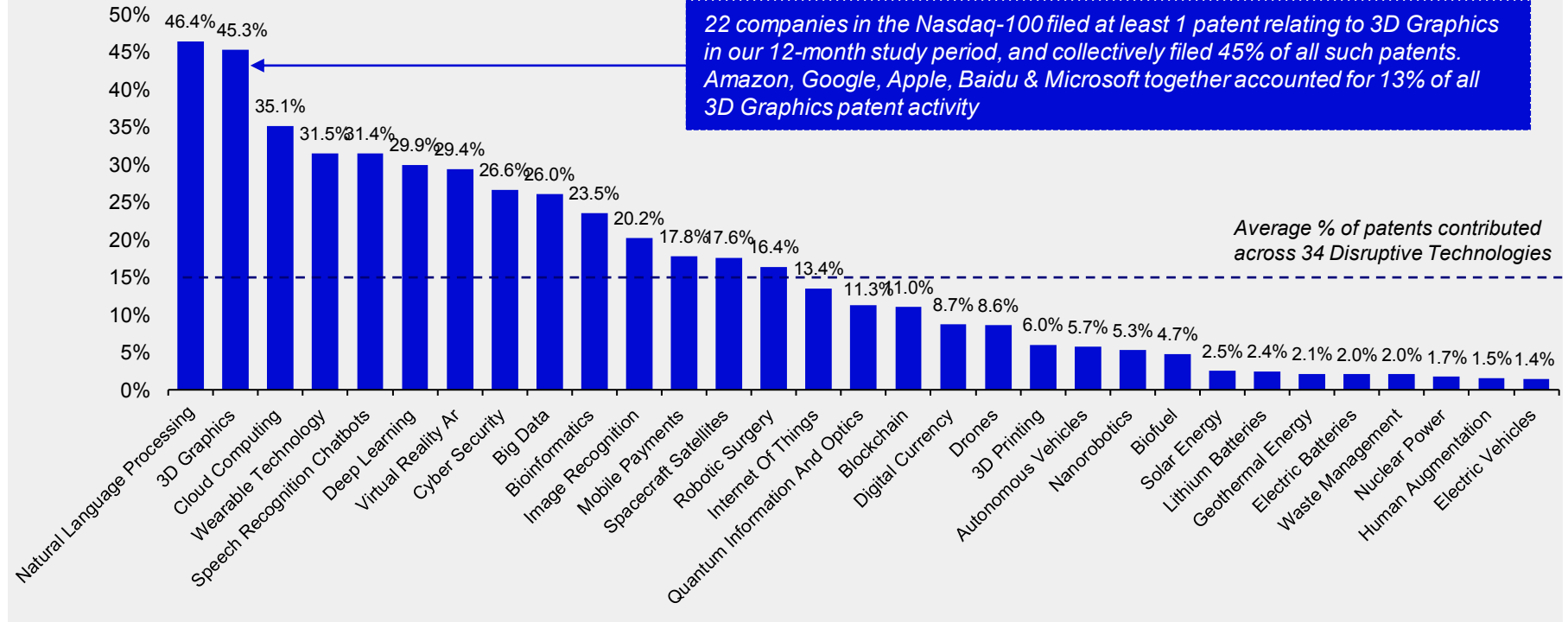


Source: Bloomberg L.P., as of 3/31/2022. Most current data available. Average weighted R&D is a market cap weighted value R&D for each index while R&D Reinvestment Rate equals R&D divided by sales for a given year. An investor cannot invest directly in an index. The NASDAQ Next Generation 100 Index® is designed to measure the performance of the next generation of Nasdaq-listed non-financial companies; that is, the largest 100 securities outside of the NASDAQ-100 Index®. The S&P MidCap 400® is designed to measure the performance of 400 mid-sized companies, The Russell Midcap® Growth Index measures the performance of the midcap growth segment of the US equity universe.

# Nasdaq-100 Index: Innovation and Patent Filings

+ 57 companies in the Nasdaq-100 (representing 80.7% of index weight) recently filed patents across one or more of 35 key areas of Disruptive Technology such as Artificial Intelligence, Clean Energy, or Blockchain

## Patent Contribution of Nasdaq-100 Companies to Selected Disruptive Technologies (trailing 1-year as of 5/31/2022)



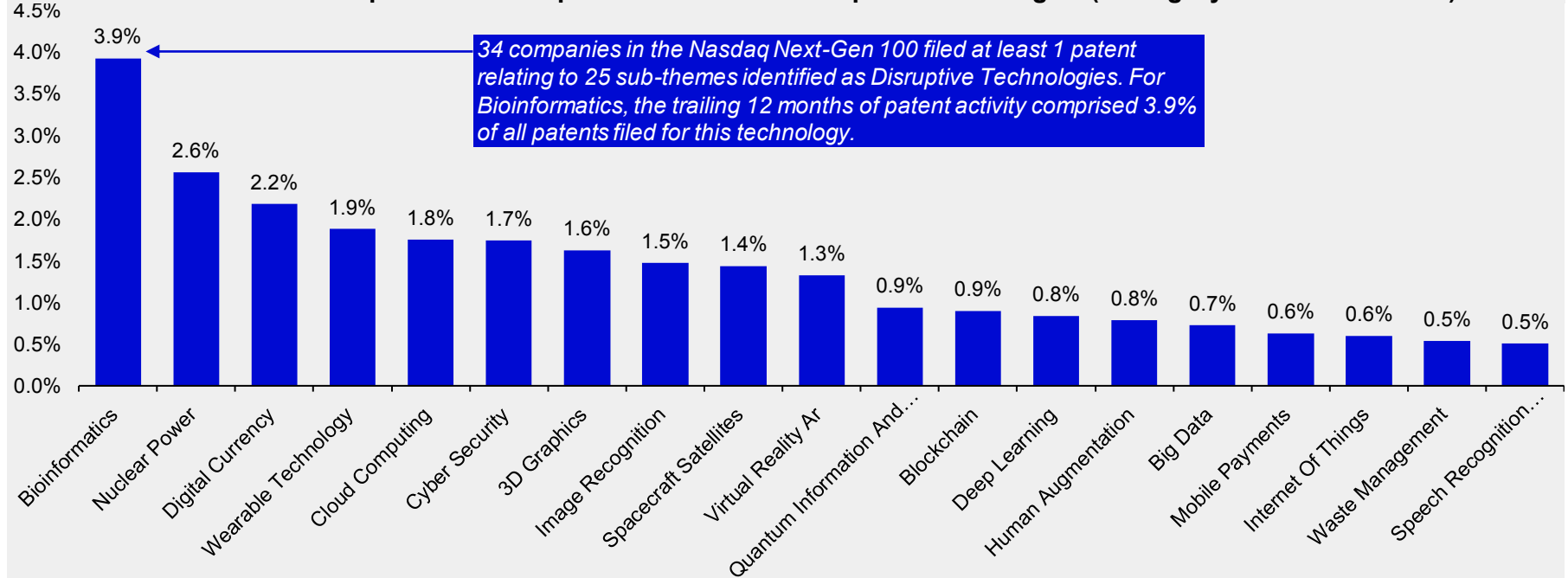
Source: Nasdaq, as of 6/30/2022; Yewno Data as of 5/31/2022. Constituents as of 6/30/2022. Most current available data available.



# Nasdaq Next Generation 100 Index: Innovation and Patent Filings

+ Commitment to R&D Spend has led to strong patent activity

**Patent Contribution of Nasdaq Next Gen Companies to Selected Disruptive Technologies (trailing 1-year as of 5/31/2022)**

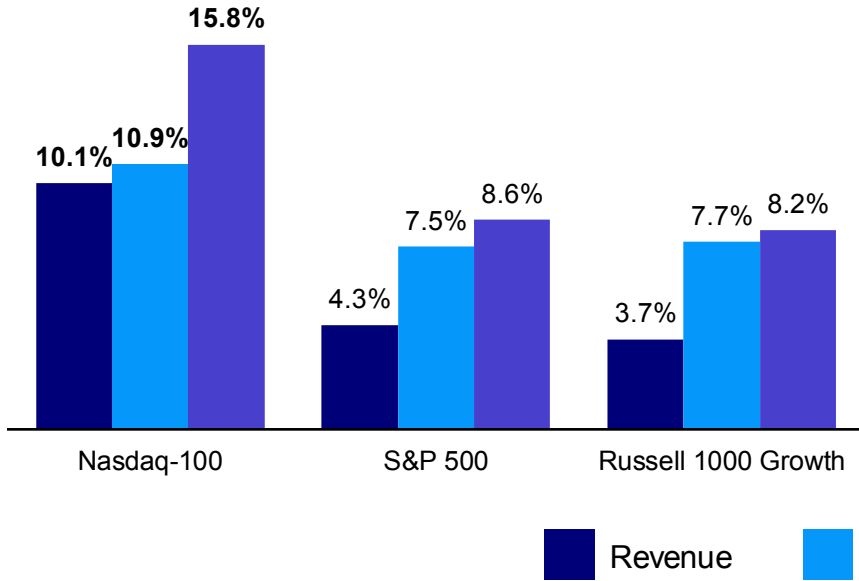


Source: Nasdaq, as of 6/30/2022; Yewno Data as of 5/31/2022. Constituents as of 6/30/2022. Most current available data available.

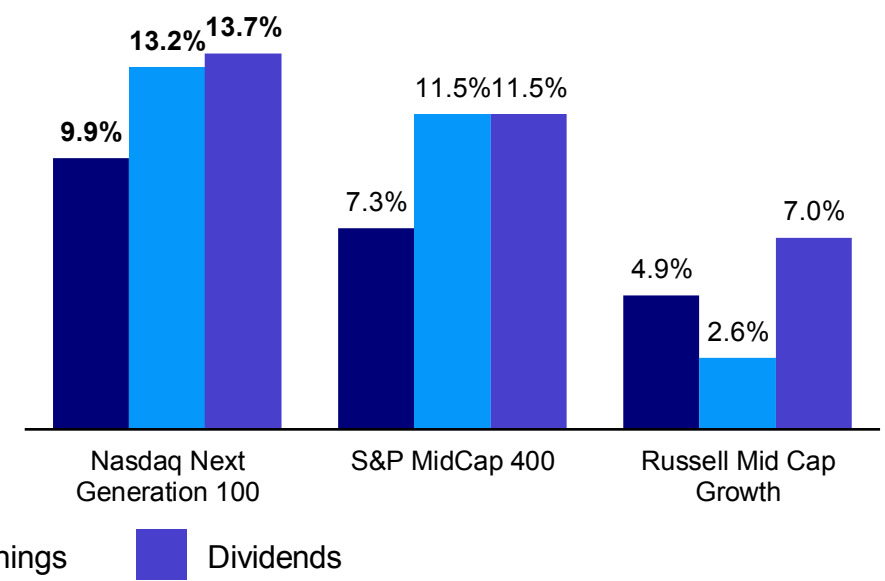
# 3

## Higher fundamental growth vs. the market

Fundamental CAGR of Nasdaq-100 vs. benchmarks



Fundamental CAGR of Nasdaq Next Gen. vs. benchmarks

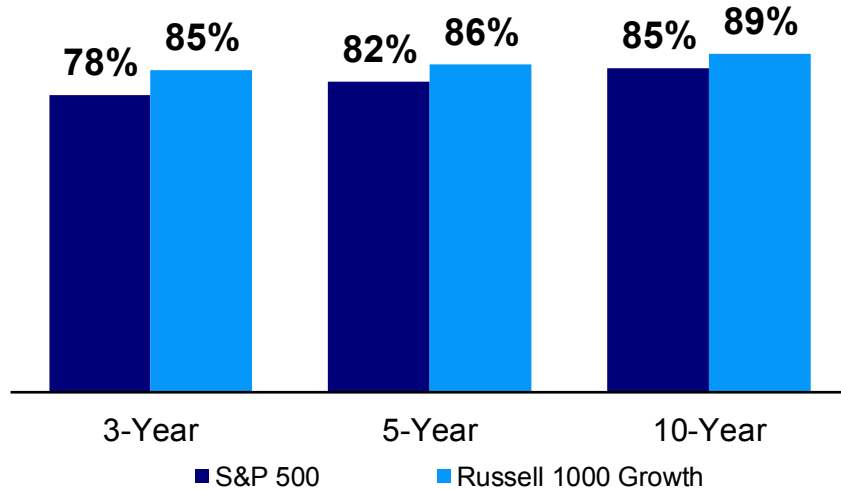


Source: Bloomberg L.P., December 31, 2011 through December 31, 2021. Most current available data. For illustration purposes only. An investor cannot invest directly in an index.

## 4

## Outperformance potential

% of time Nasdaq-100 Index has outperformed the S&P 500 and Russell 1000 Growth Indexes



Annualized outperformance since 1999 vs. the S&P 500 and Russell 1000 Growth Indexes

*Nasdaq-100 versus....*

S&P 500

Russell 1000 Growth

**+1.61%**

**+1.75%**

Source: Morningstar Research Inc. as of 9/30/2022. Performance shown in bar chart consists of rolling monthly periods between 4/1/1999 – 9/30/2022. The Russell 1000® Growth Index measures the performance of the large-cap growth segment of the US equity universe.

## Case Study in Innovation: NVIDIA

Name	Market Cap	2021 R&D Reinvestment Rate	Themes with Overlap	Patent Categories
NVIDIA	~\$302 billion	23.53%	8	12

- R&D spend has increased 195% over past 5 years and has a reinvestment rate of 23.53% in 2021
- Overlap in 40% of measured “thematic” indices: Gaming, 5G, Smart Grid, Disruptive Tech, Semiconductors, Artificial Intelligence, Future Mobility and Robotics
- Filed patents across 12 different Disruptive Technologies including: virtual reality, cloud computing and blockchain.

Source: Bloomberg, L.P., Nasdaq, Yewno as of 9/30/2022.

Any stock, ETFs, options or futures symbols displayed are for illustrative purposes only and are not intended to portray recommendations. Past performance does not guarantee future results.

# Case Study in Innovation: Zebra Technologies

Name	Market Cap	2021 R&D Reinvestment Rate	Themes with Overlap	Patent Categories
Zebra Technologies	~\$14 billion	10.08%	2	10

- R&D spend has increased 44% over past 5 years and has a reinvestment rate of 10.08% in 2021
- Overlap in 2 thematic indices: Disruptive Tech and Robotics
- Filed patents across 10 different Disruptive Technologies including: drones, mobile payments, deep learning, image recognition, blockchain, 3D graphics, virtual reality, cyber security, electric batteries & lithium batteries.

Source: Bloomberg, L.P., Nasdaq, Yewno as of 9/30/2022.

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## Three potentially effective ways to implement

1

### **Implement as core exposure**

within large or mid-cap growth equity

2

### **Complement**

your large cap value equity strategies

3

### **Replace**

high-fee, underperforming active strategies

# Accessing Small-Cap Innovation Through Patents

# Design Goals for the Nasdaq Innovators Completion Cap Index (NCX)

A woman with dark, curly hair is shown in profile, looking down at a laptop screen. She is wearing a yellow top. The background is a solid teal color.

**Seek to include companies with valuable IP before the market accurately assesses value**

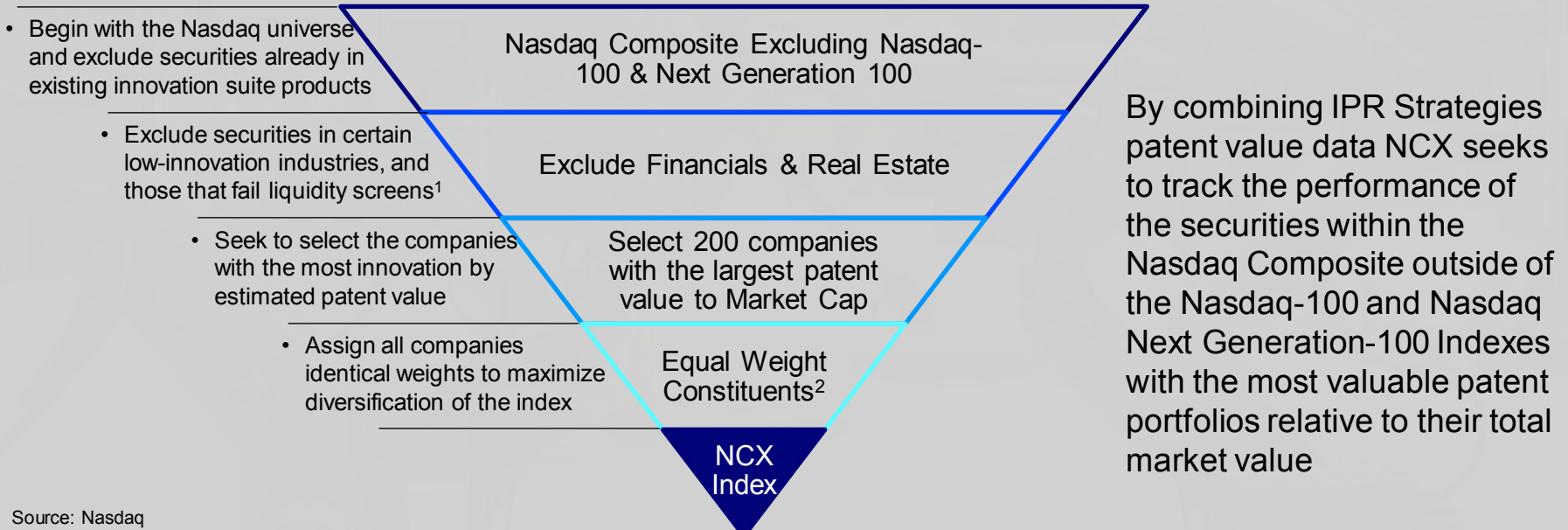
**Include smaller companies with a high commitment to research & development investment**

**Offer exposure to companies that may be laying the research groundwork to become industry giants**



# Nasdaq Innovators Completion Cap Index Construction

## Seeking to create an index of firms that have created valuable innovations



Source: Nasdaq

1. Securities must have a market capitalization of at least \$100 million, and a three-month average daily traded value of at least \$1 million (USD)

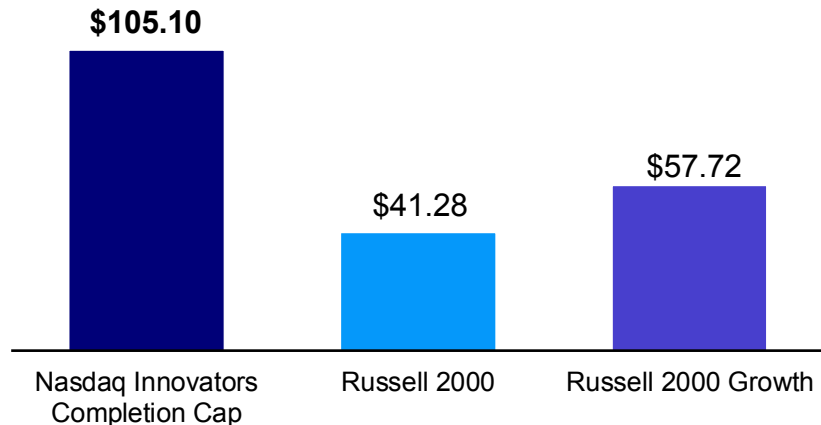
2. Index is reconstituted semi-annually on the first trading day following the third Friday of June & December, and are rebalanced on the first trading day following the third Friday in March, June September, and December

The Nasdaq Innovators Completion Cap Index™ is designed to track the performance of the companies in the Nasdaq Composite Index, outside of the Nasdaq-100 Index® and Nasdaq Next Generation 100 Index®, that have the most valuable patent portfolios relative to their total market values.

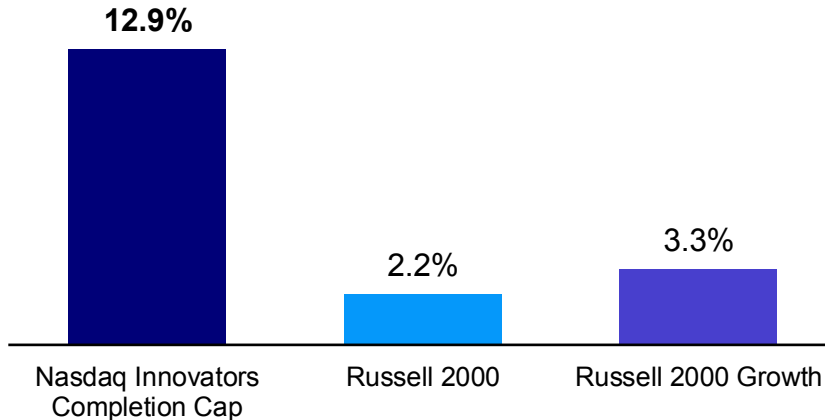
# Research and Development Powerhouse

- Companies in the Nasdaq Innovators Completion Cap Index (NCX) spend nearly twice as much in R&D, on average, compared to those in the Russell 2000 Growth Index (RUO); 90 NCX constituents are currently tracked by RUO
- Calculating R&D as a percent of sales in the last 12 months, NCX companies averaged nearly 4 times higher than Russell 2000 Growth, and nearly 6 times higher than the overall Russell 2000 Index (RTY)

**Weighted Average Annual R&D Expense (\$M)**



**Weighted Average R&D as % Sales**



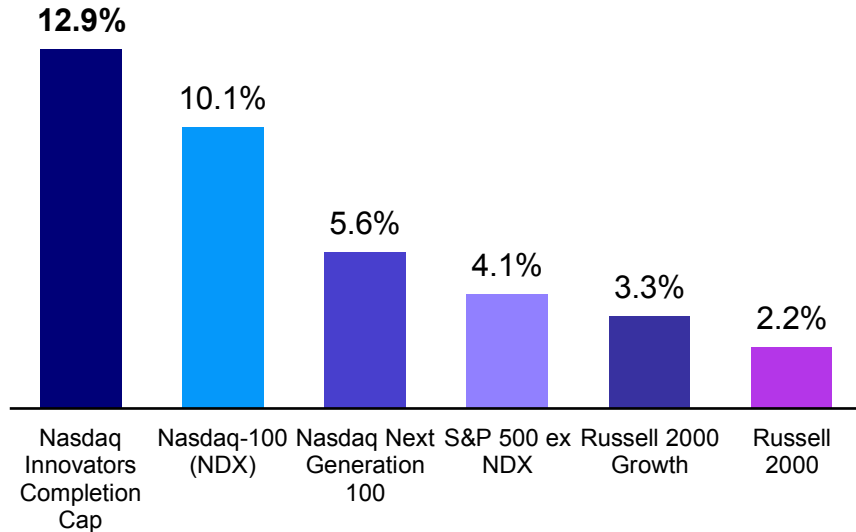
Source: Nasdaq, Factset. Data as of 06/30/2022, based on most recent 4 quarters of available financial data.

The Nasdaq Innovators Completion Cap Index™ is designed to track the performance of the companies in the Nasdaq Composite Index, outside of the Nasdaq-100 Index® and Nasdaq Next Generation 100 Index®, that have the most valuable patent portfolios relative to their total market values. The Russell 2000® Index measures the performance of the small-cap segment of the US equity universe. The Russell 2000® Growth Index measures the performance of the smallcap growth segment of the US equity universe.

# Research & Development (R&D) Across Nasdaq Indexes

## Innovators Completion Cap Index constituents have spent more of income on R&D

### Weighted Average R&D Expense as % Sales



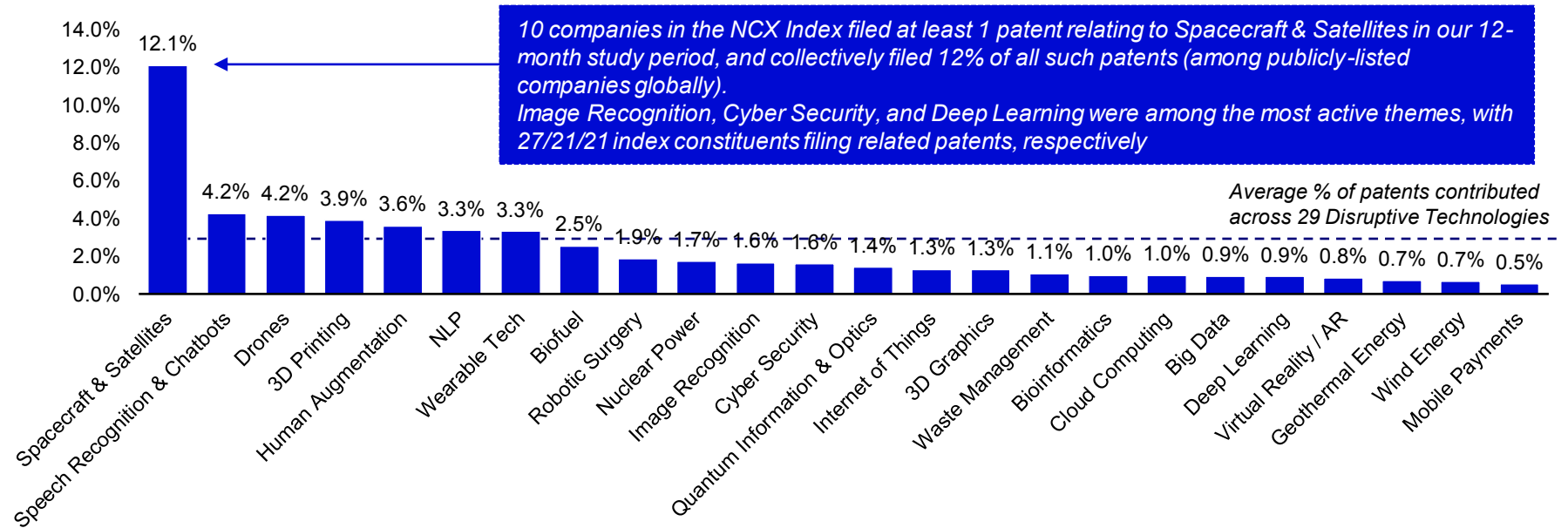
- Research expenditure as a percentage of sales generally seems to decrease overall as the universe moves down-cap
- Overall, the constituents of the Nasdaq Indexes discussed appear to have had higher research expenditures than those of the broad market indexes in their market-cap space, or even the “Growth” indexes in them
- Despite having the lowest average market cap, the Nasdaq Innovators Completion Cap Index constituents had the highest average R&D expenditure as a percentage of sales of any of these Nasdaq indexes.
- Even the S&P 500 Excluding NDX had a higher average R&D expense as a percentage of sales than the Russell 2000 or Russell 2000 Growth indexes

Source: Nasdaq, LTM financial data for NCX constituents as of June 30, 2022, including R&D % of Sales. NDX/NGX/SPX data as of FY'21.

# Nasdaq Innovators Completion Cap Index: Innovation and Patent Filings

- 72 companies in the Nasdaq Innovators Completion Cap Index (NCX) (representing 34% of index weight) recently filed patents across one or more of 29 key areas of Disruptive Technology such as Artificial Intelligence, Clean Energy, or Space Tech

## Patent Contribution of Innovators Completion Cap Companies to Selected Disruptive Technologies (trailing 1-yr as of 5/31/2022)



Source: Nasdaq, as of 6/30/2022; Yewno Data as of 5/31/2022. Constituents as of 6/30/2022. Most current available data available.

# Thank you

# Appendix

## Important information

# About risk

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