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Why biopharma is prioritizing data to build better medicines

A biopharma executive survey from TetraScience and Amazon Web Services (AWS)

We spoke with 500 biopharma executives to discover how industry leaders plan to deliver better therapeutics to patients faster. Their answer was clear. **Maximize the value of scientific data with cloud-enabled FAIR (Findable, Accessible, Interoperable, Reusable) data** across the value chain (discovery, development, and manufacturing). Respondents believe this will impact three key industry drivers.

Speed
- Learning from experiments faster
- Reducing time to market for therapeutics
- Accelerating innovation

Cost
- Improving productivity
- Increasing operational efficiency
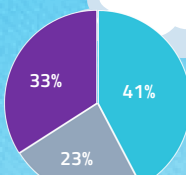- Increasing return on investment (ROI)

Risk
- Improving drug safety
- Reducing errors
- Improving regulatory compliance

Cloud capabilities and the cost for life science laggards

Out of **500** executives:

- **41%** MOVING TO THE CLOUD
- **33%** CLOUD LAGGARDS (no cloud replatforming or in initial stages)
- **23%** CLOUD LEADERS (fully replatformed to the cloud)

CLOUD LAGGARDS face competitive disadvantages because they either just started their digital transformation journeys or haven't even planned to start.

- **$100M in lost productivity** for mid-size biopharmas due to fragmented, siloed data
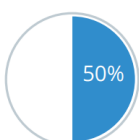- **$1.26 million lost per day** when delaying a drug's launch
- **7X more likely to require** repeated experiments due to missing or incomplete data
- **3.7X more spent** on legacy scientific data management infrastructure

The state of scientific data

50% Scientific data is sufficiently prepared and available for analysis and data applications

~only 50% of scientific data is FAIR

> *I think people underestimate how little clean data there is out there, and how hard it is to clean and link the data."* - Vas Narasimhan, CEO Novartis

Findable **A**ccessible **I**nteroperable **R**euseable

Keys to successful scientific data strategies according to biopharma executives
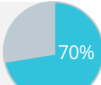
Increase speed
- Learn from experiments faster
- Reduce time to market for therapeutics
- Accelerate innovation

> In my view it [FAIR data] can accelerate innovation and reduce the time needed to bring a drug to market."
> -Senior Director of R&D IT, mid-size Benelux biotech firm

1 Year: Average time respondents want to reduce their time to market

Nearly 70% of all respondents chose digital transformation or hiring more R&D IT professionals as the most impactful strategy to accelerate time to market.

70%

Cloud leaders were asked: How much did FAIR harmonized data in the cloud improve time to market?

Over 60% of cloud-leading executives reported significant (≥25%) improvements in time to market.

Lower cost
- Improve productivity
- Increase operational efficiency
- Increase return on investment (ROI)

8 in 10 biopharma executives say FAIR data could reduce costs by >10%

73% of executives in cloud-advanced companies believe high-quality data will have a large to very large impact on reducing costs

33% of executives without advanced cloud capabilites agreed

Switching to FAIR data in the cloud could save companies hundreds of millions of dollars.

Reduce risk
- Improve drug safety
- Reduce errors
- Improve regulatory compliance

Our survey reveals a considerable amount of wasted time by researchers who are forced to repeat experiments in order to avoid errors due to missing or incomplete data, and that cloud "laggards" are impacted significantly more than their advanced peers.

> FAIR data in the cloud has boosted our efficiency, prevented work from being repeated unnecessarily, and allowed us to ask questions we could never have asked before."
> -Head of R&D IT at a mid-size U.S. biotech/biopharma

SURVEY QUESTION:

Do you have to repeat experiments due to missing or incomplete data?

- **88%** Executives with no plans to replatform to the cloud
- **60%** Executives planning to replatform to the cloud
- **8%** Cloud-native executives

% of executive who answered "Yes"

To see the complete TetraScience and Amazon Web Services biopharma executive survey, visit
tetrascience.com

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