INVITAE:
Bringing genetic information into mainstream medical practice

OVERVIEW FOR INVESTORS
MAY 2016

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Safe Harbor Statement

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including statements relating to the company's expectations regarding its plans for 2016, including revenue levels, the cost of goods sold, the number of billable tests delivered, the number of genes in its test menu, and the nature and extent of future reimbursement coverage; the company's expectations regarding continued growth in 2016; and the timing of any new testing service releases and the benefits and attributes of any such services. Forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially, and reported results should not be considered as an indication of future performance. These risks and uncertainties include, but are not limited to: the company's history of losses; the company's need to scale its infrastructure in advance of demand for its tests and to increase demand for its tests; the company's ability to develop and commercialize new tests and expand into new markets; the risk that the company may not obtain or maintain sufficient levels of reimbursement for its tests; risks associated with the company's ability to use rapidly changing genetic data to interpret test results accurately and consistently; the company's ability to compete; laws and regulations applicable to the company's business, including potential regulation by the Food and Drug Administration; and the other risks set forth in the company's filings with the Securities and Exchange Commission, including the risks set forth in the company's Annual Report on Form 10-K for the year ended December 31, 2015. These forward-looking statements speak only as of the date hereof, and Invitae Corporation disclaims any obligation to update these forward-looking statements.

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Invitae's story: Bringing genetics into mainstream medicine to help billions of people

Everyone has a unique genome that has a significant impact on their health

There are over 4,000 medically important genetic tests today – most of which are over-priced and under-utilized

High quality, low priced genetic testing will dramatically increase the total market to everyone with access to healthcare

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Genetic conditions affect everyone

“Rare” genetic conditions are actually common in the aggregate

Hereditary cancer	~5-10%	**1 in 20 to 1 in 10** of all cancers are likely to have a hereditary basis
Cardiology	0.4%	**1 in 250** people has a gene mutation that may lead to early onset cardiovascular disease
Hematology	~0.5-5%	**1 in 20 to 1 in 200 people** carry the Factor V Leiden variant that may increase risk for blood clotting
Neurology	0.3%	**1 in 300** will have an epileptic seizure during their lifetime

Pediatric genetics	~2%	**1 in 50** new births result in a complication involving a genetic condition
Preventive	~2-5%	**1 in 20 to 1 in 50 healthy people** has a gene mutation that puts them at risk for a medically actionable condition
Carrier	~100%	**Everyone** is carrying mutations that can cause severe illness in a child if the child’s other parent provides a mutation in the same gene
Pharmacogenetics	~100%	**Virtually everyone** is carrying mutations affecting drug response

Everyone carries mutations in their genome that cause disease, affect drug response or recessive genetic conditions that may affect their families

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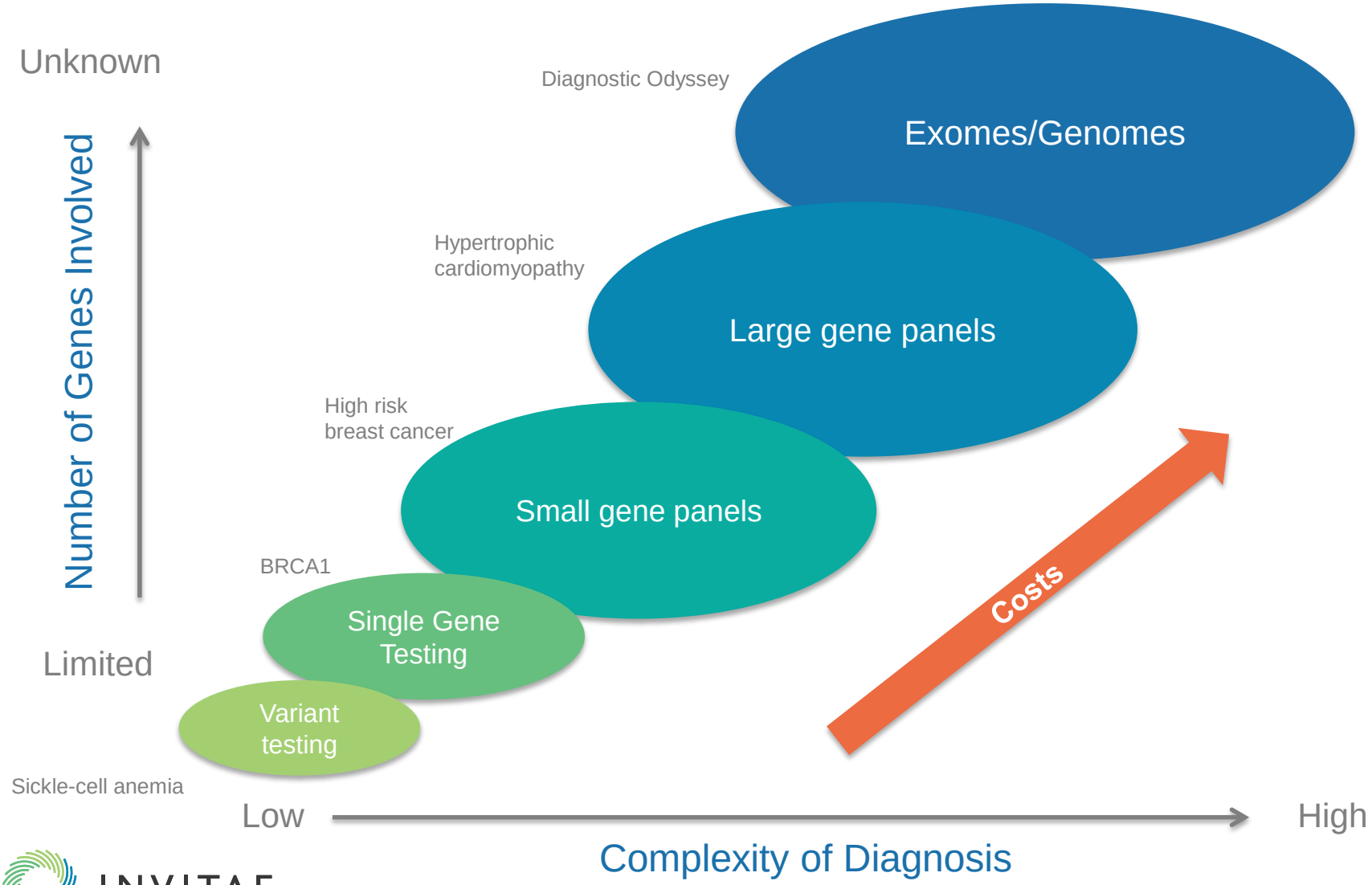
Historically, genetic testing was limited by cost



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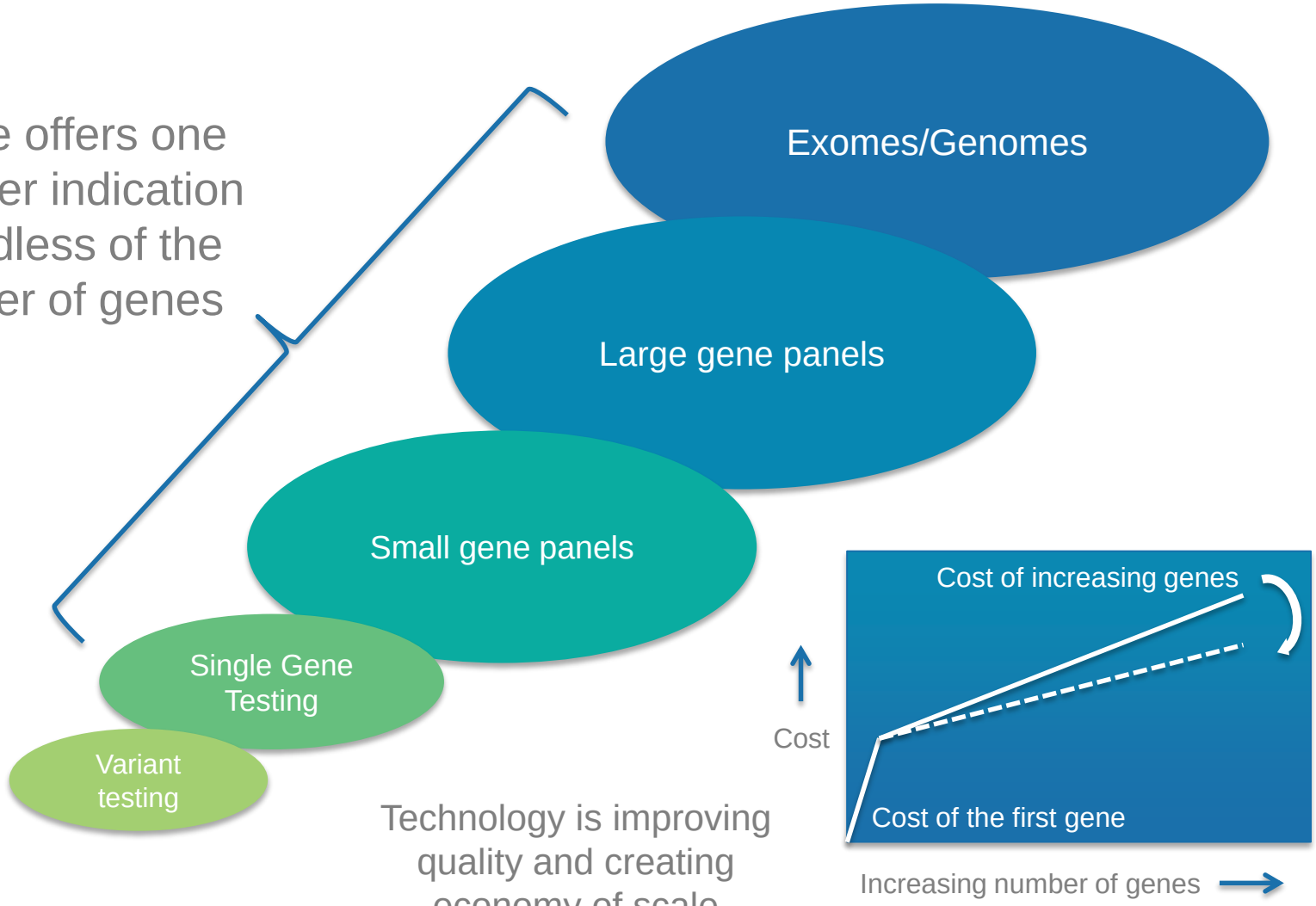
Invitae is changing the cost structure of the industry

Invitae offers one price per indication regardless of the number of genes



Technology is improving quality and creating economy of scale

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Genetic testing is a multi-billion dollar industry today

…but it's highly fragmented, inefficient, and prohibitively expensive

- 55,208 different genetic assays currently available across 4,489 disorders and 5,328 genes
  (GeneTests.org, January 7, 2016)
- Over 673 laboratories and 1,068 clinics
  (GeneTests.org, January 7, 2016)
- Quality and content is variable
- Prices can reach into the thousands of dollars and even tens of thousands for complex tests
- Turn around times can often be months or more

Invitae provides a new world of high quality, low cost genetic testing

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- Comprehensive content across all disease areas
- High quality peer-reviewed science
- One-stop online ordering for any and every high quality genetic test
- Fast turn around times
- Open and transparent pricing below $1,000 for patients and contracted payers with full reimbursement support

Invitae is well positioned for growth in 2016 and 2017

Our Mission

Bring comprehensive genetic information into mainstream medical practice to improve the quality of healthcare for billions of people

Our Goal

Aggregate all the world's genetic tests into a single platform to make genetics affordable and accessible for everyone

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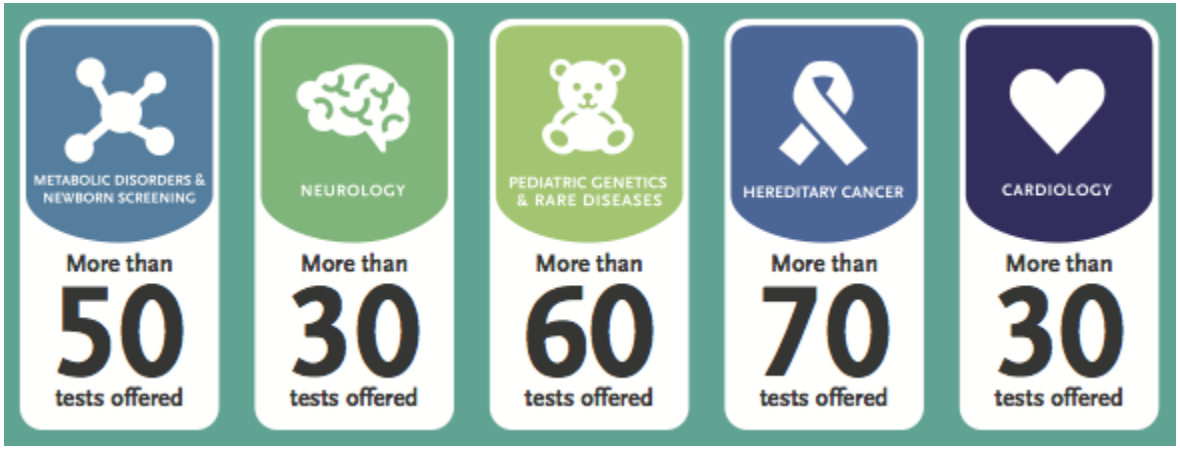
Only genetic testing laboratory to aggregate the world's genetic tests into a high quality, affordable offering



- Recently expanded beyond cancer and cardiology with metabolic disorders/newborn screening, neurology, and pediatric/rare diseases
- Now has more than 1,000 genes in production for less than $1,000 – achieved milestone a year early through R&D acceleration

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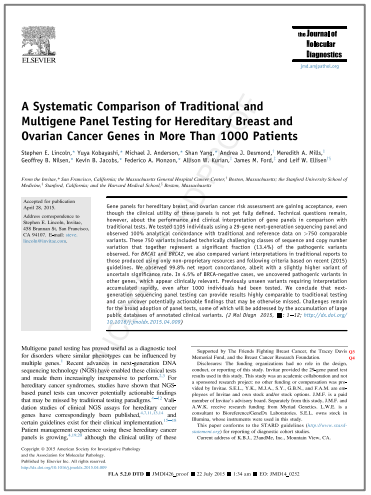
Invitae has demonstrated the quality of our service

~1,000 patient study head-to-head with Myriad



A Systematic Comparison of Traditional and Multigene Panel Testing for Hereditary Breast and Ovarian Cancer Genes in More Than 1000 Patients

Analytical validity for BRCA testing
Analytical Concordance – 100%

Clinical validity for BRCA testing
Clinical Concordance – 99.8%

>1,000 patient study demonstrating clinical utility

JAMA Oncology

Clinical Actionability of Multigene Panel Testing for Hereditary Breast and Ovarian Cancer Risk Assessment

Demonstrated clinical utility beyond BRCA for hereditary cancer panels based on NCCN guidelines

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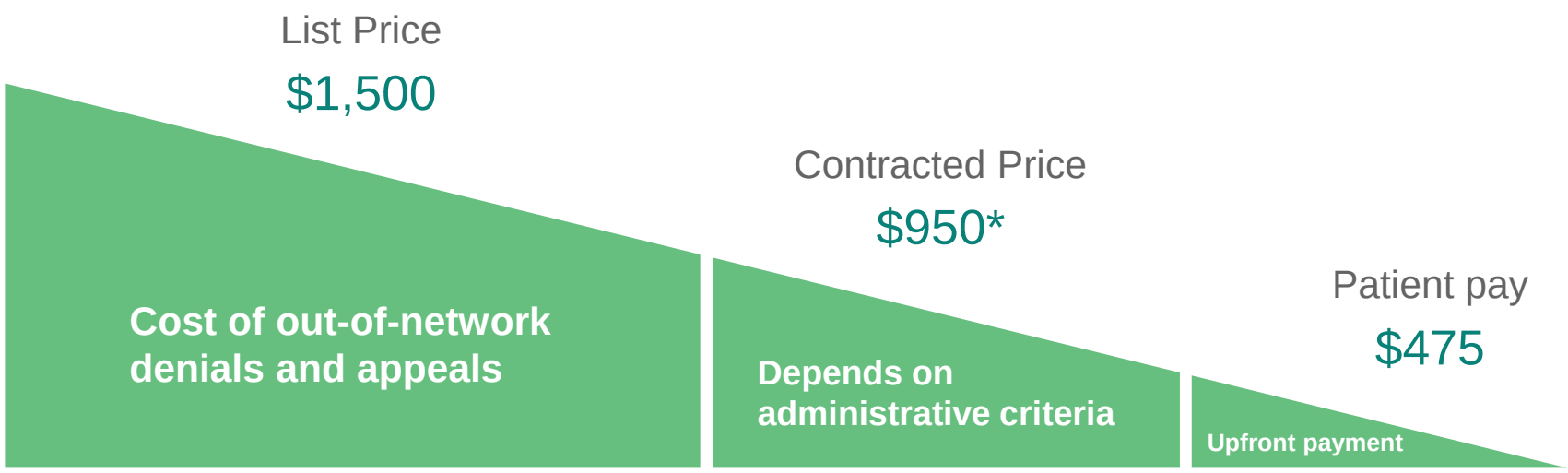
Invitae offers high quality at lower prices

- One price per indication regardless the number of genes
- Re-requisition at no additional charge within 90 days in original indication
- Patient pay alternative for those who do not meet insurance criteria



*Contracted price is as low as $950 per indication depending on administrative criteria

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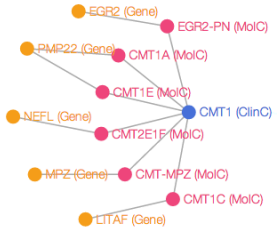
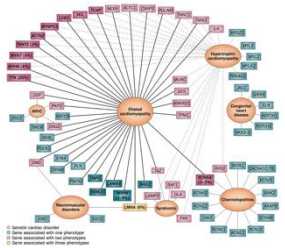
21st century approach to medical genetics

Hereditary Cancer Syndromes

Hereditary Neurological Conditions



Hereditary Cardiac Conditions



World-class Talent

Great Technology

Great Automation

Peer-reviewed Science

CARDIOLOGY | HEREDITARY CANCER | PEDIATRIC GENETICS | NEUROLOGY | HEMATOLOGY


The Invitae Test Catalog

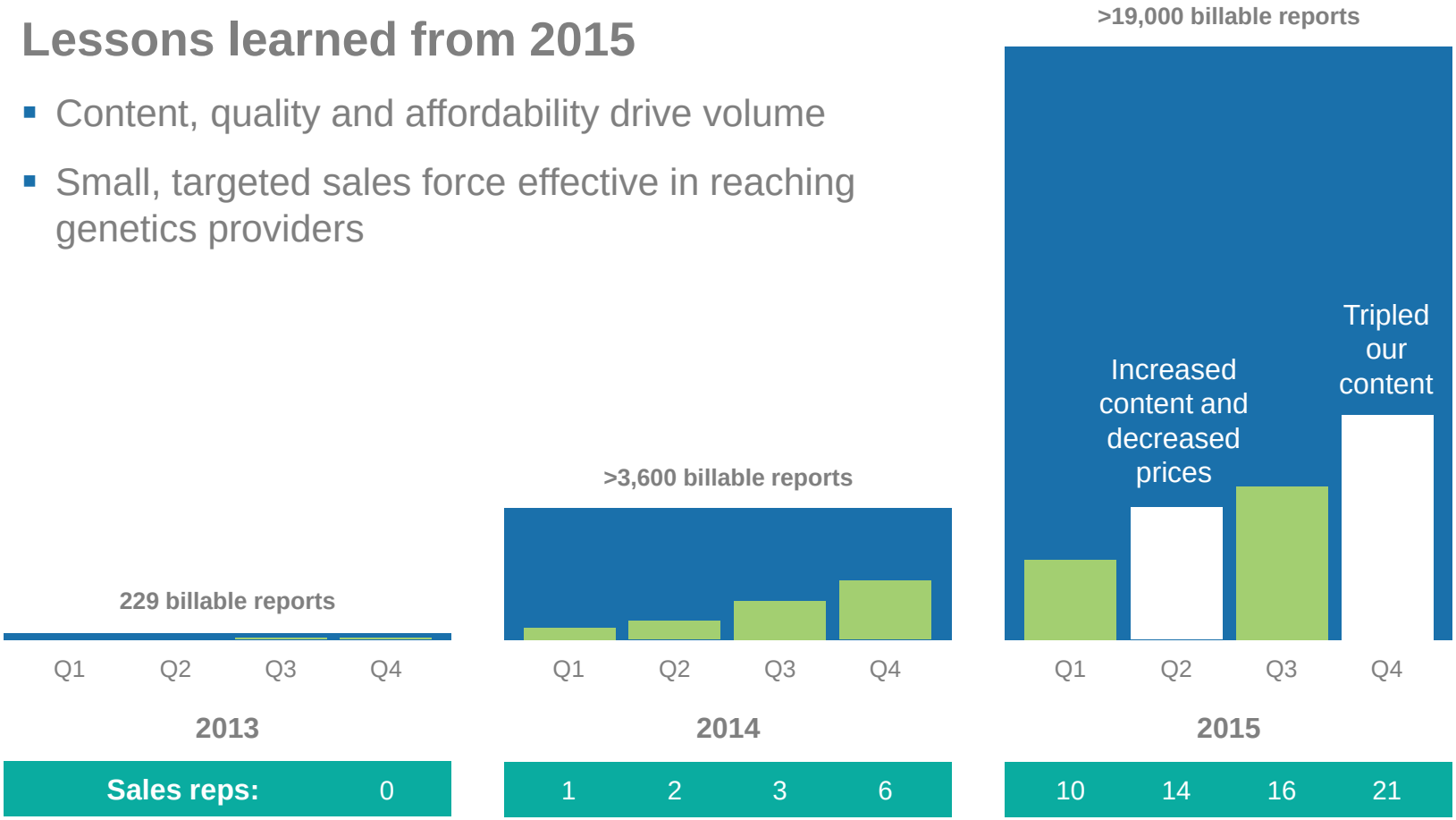
Economy of Scale

- One laboratory process
- One-stop online ordering
- One low price per indication

Foundational year: demonstrated scalability and growth

Lessons learned from 2015

- Content, quality and affordability drive volume
- Small, targeted sales force effective in reaching genetics providers



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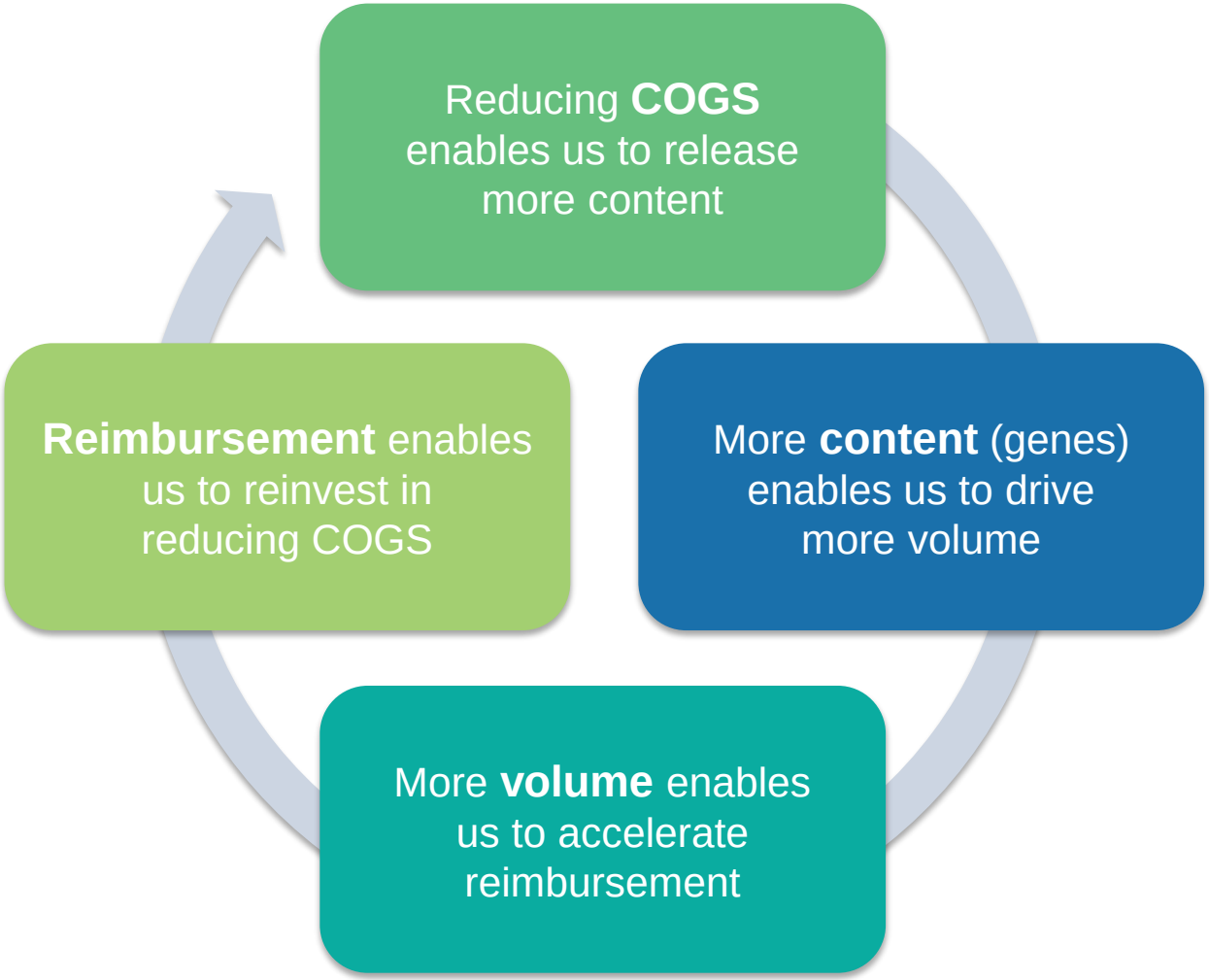
Measuring our success



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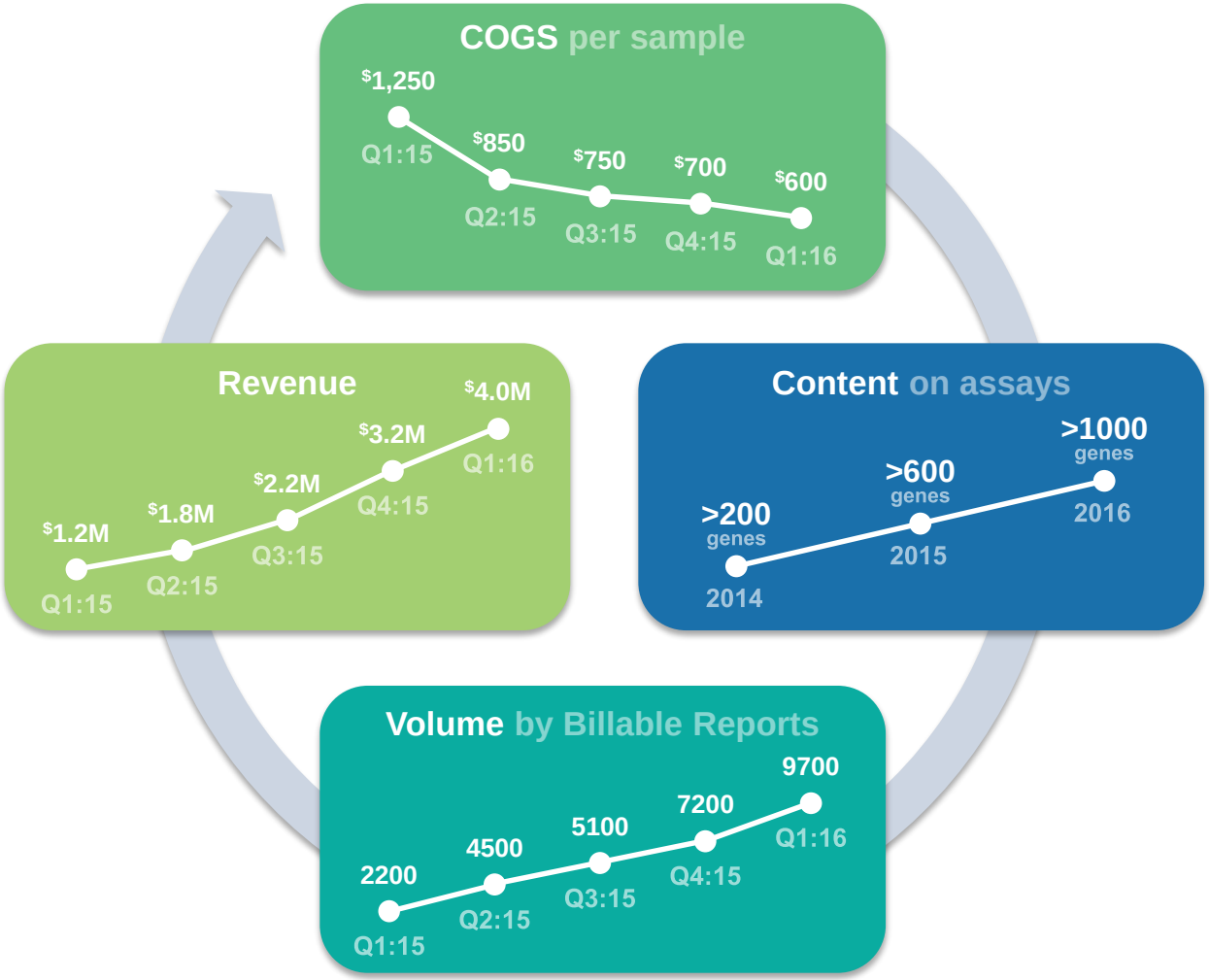
Consistent execution



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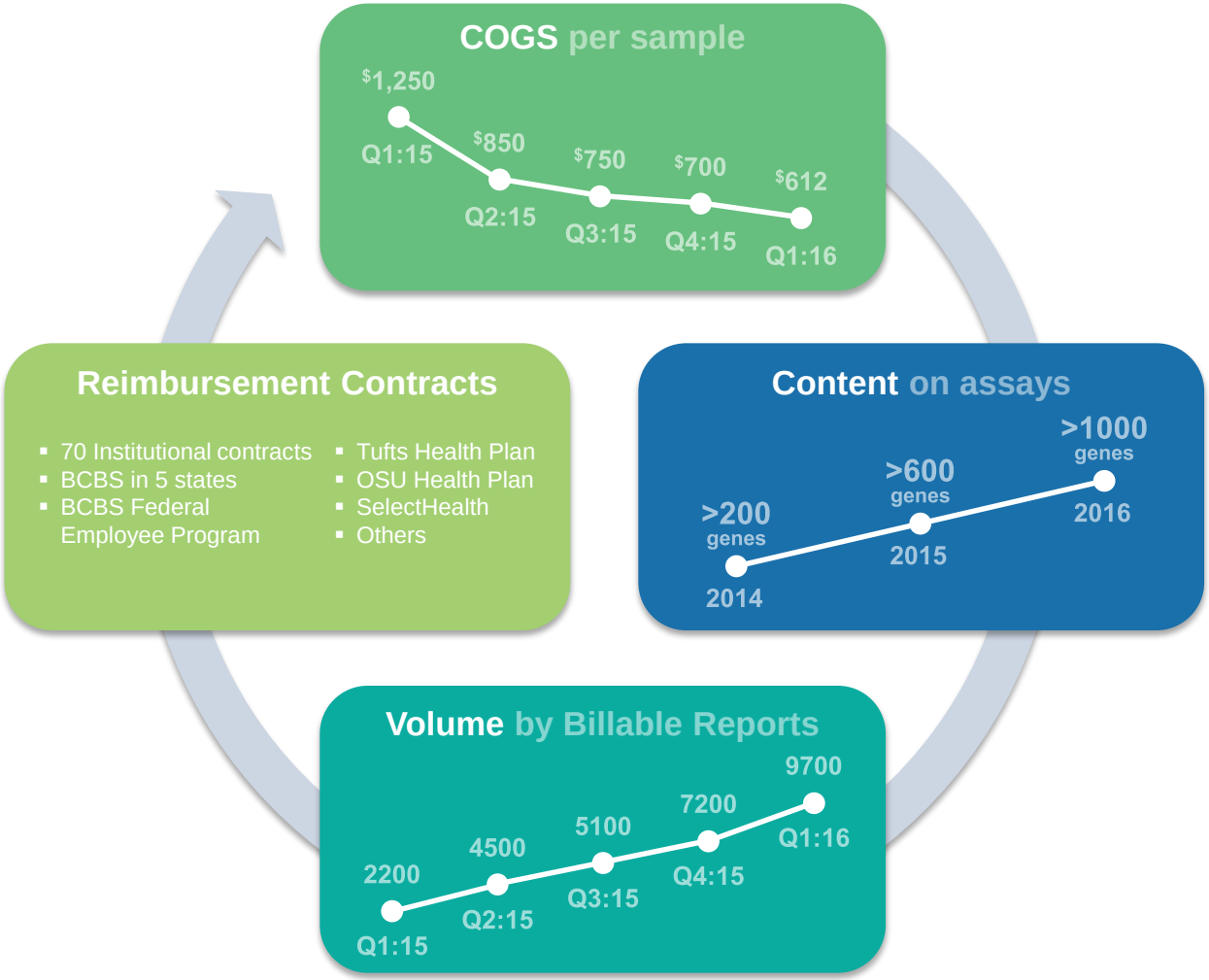

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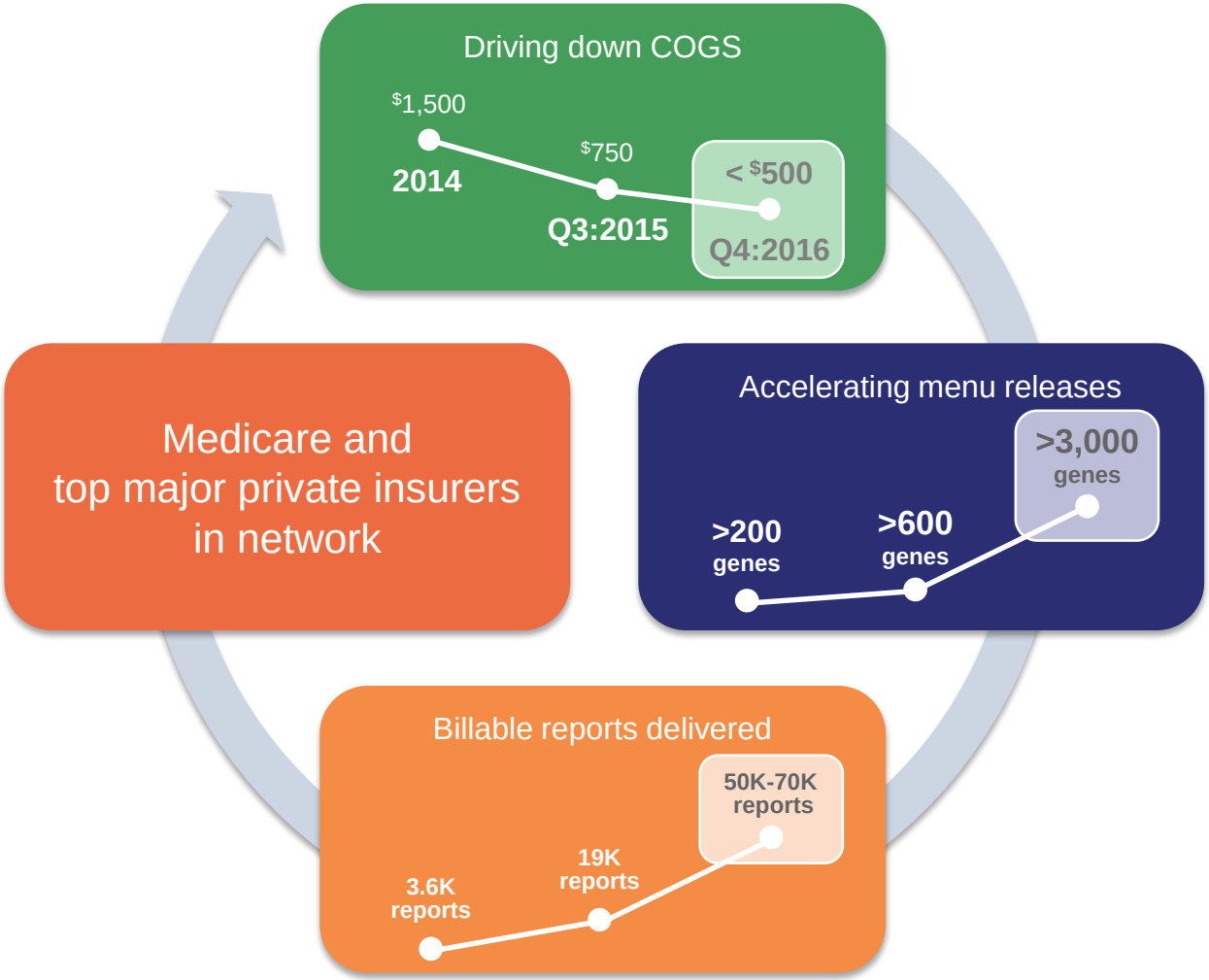
Measuring our success in 2016



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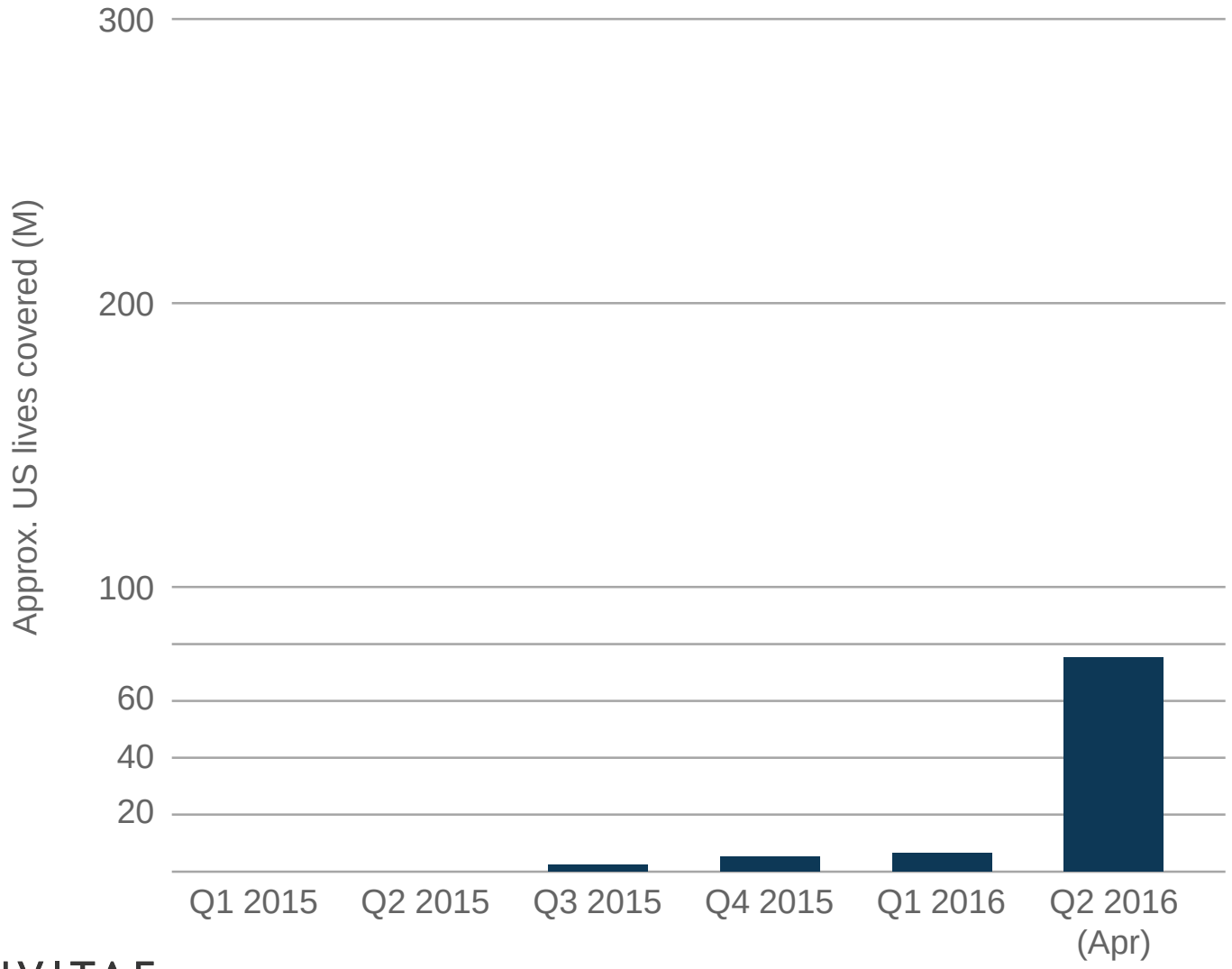
Progress on reimbursement



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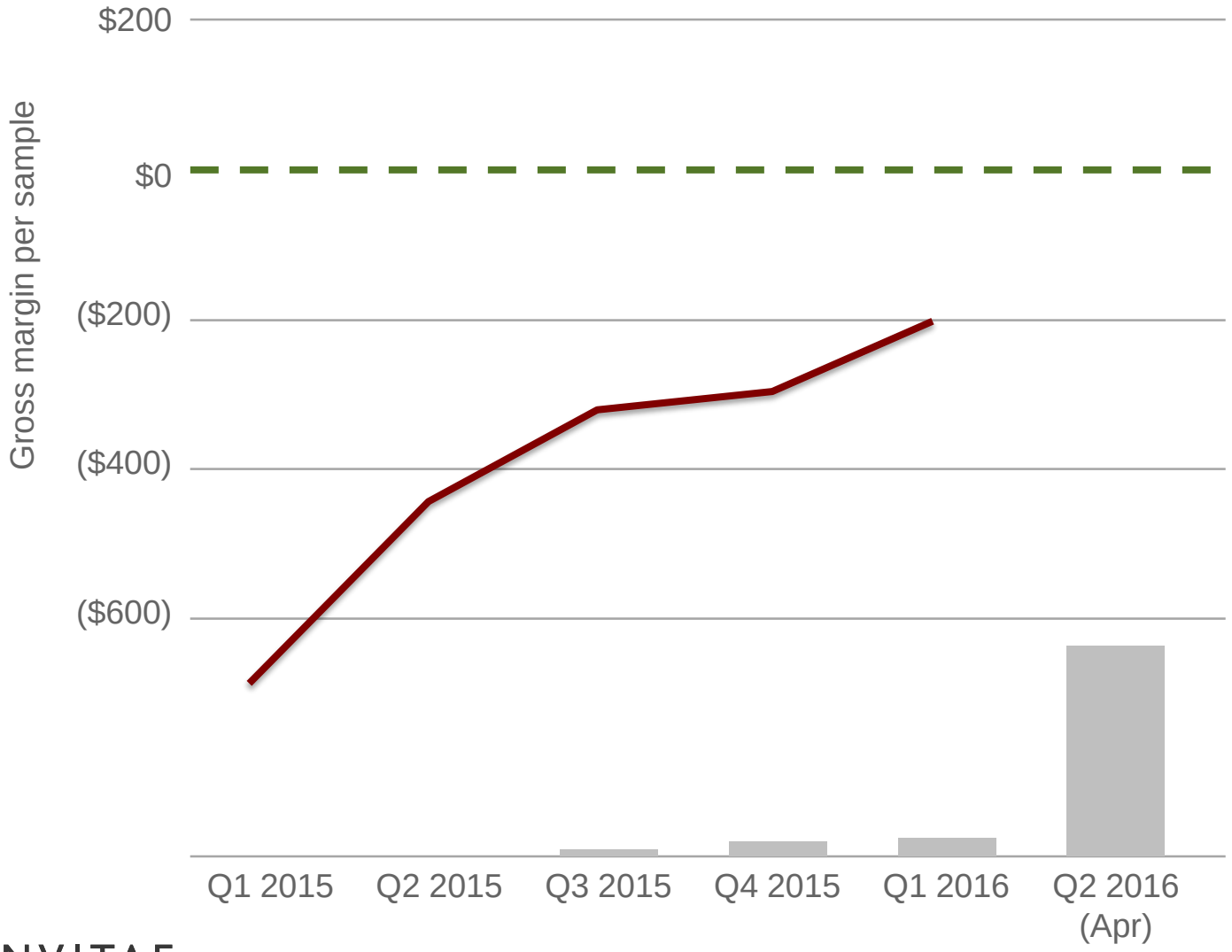
The business model works



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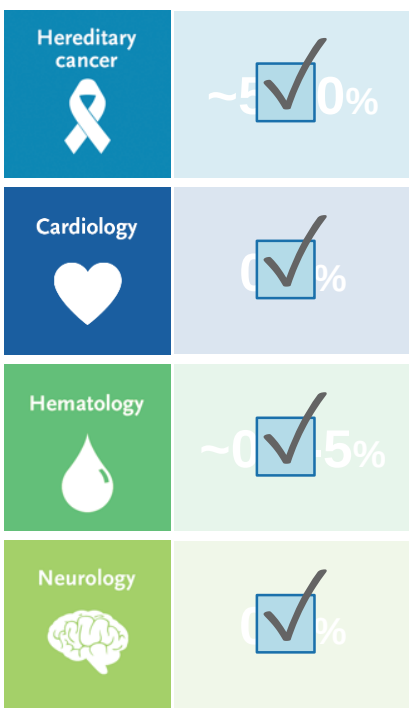
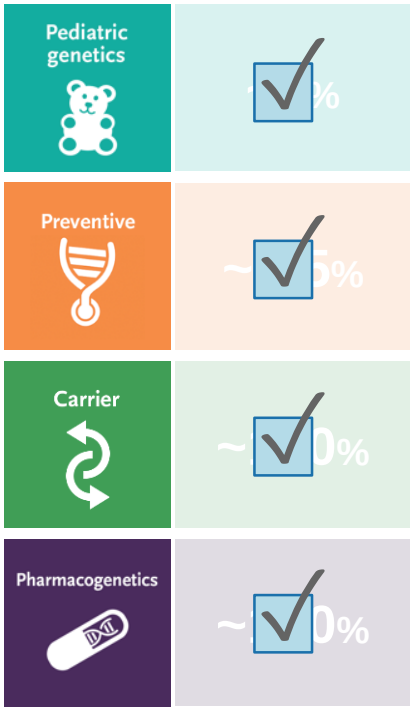
Expanding menu by the end of 2016

"Rare" genetic conditions are actually common in the aggregate





Evaluating risk for medically actionable disorders in healthy adults

Testing genes for recessive variants in individuals interested in pre-conception and family risk assessment

Testing specific genetic variants linked to drug efficacy

Everyone carries mutations in their genome that cause disease, affect drug response or recessive genetic conditions that may affect their families

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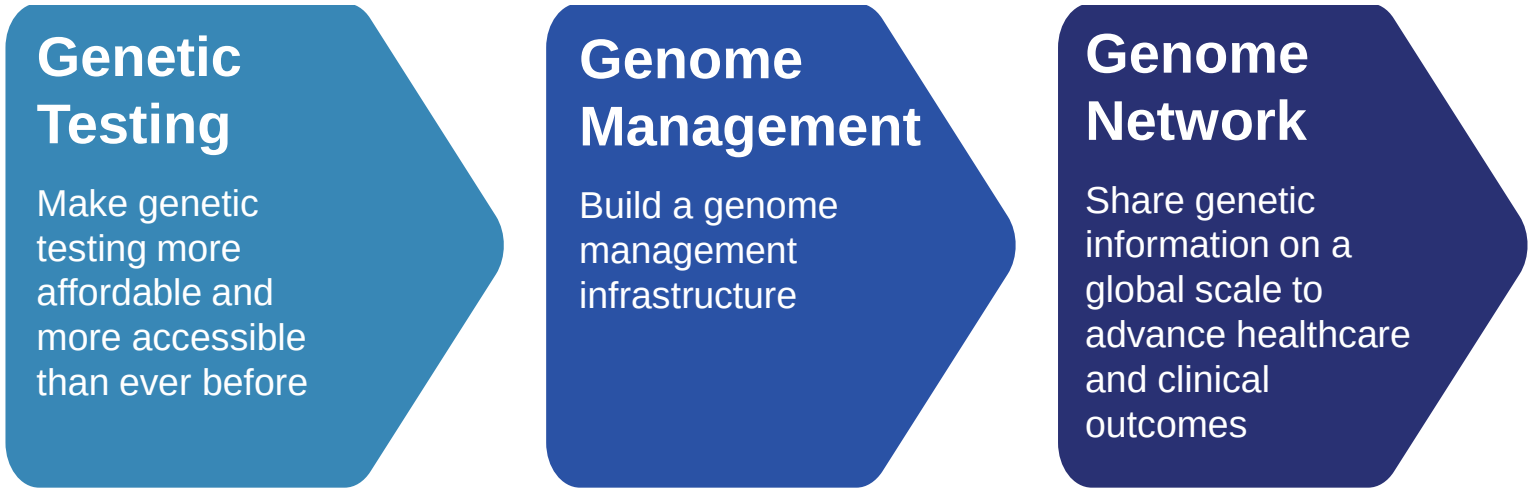
The three phases of our business model



High volume market for genetic testing with focus on quality and price

Genomics will create value over the lifetime of a customer

Monetizing networks for permission-based sharing of genetic information

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Invitae is piloting health and wellness in 2016

Simple facts about the size of our healthcare economy where preventive genetics could help

Hereditary cancer	**1.6** million	New cancers per year
Cardiology	**1.5** million	Heart attacks per year
Hematology	**50** million	Surgeries per year
Neurology	**3** million	New disabling neurological disorders per year

Pediatric genetics	**4** million	Births per year
Preventive	**1** billion	Doctor visits per year
Carrier	**1** million	First time parents per year
Pharmacogenetics	**4** billion	Prescriptions written per year

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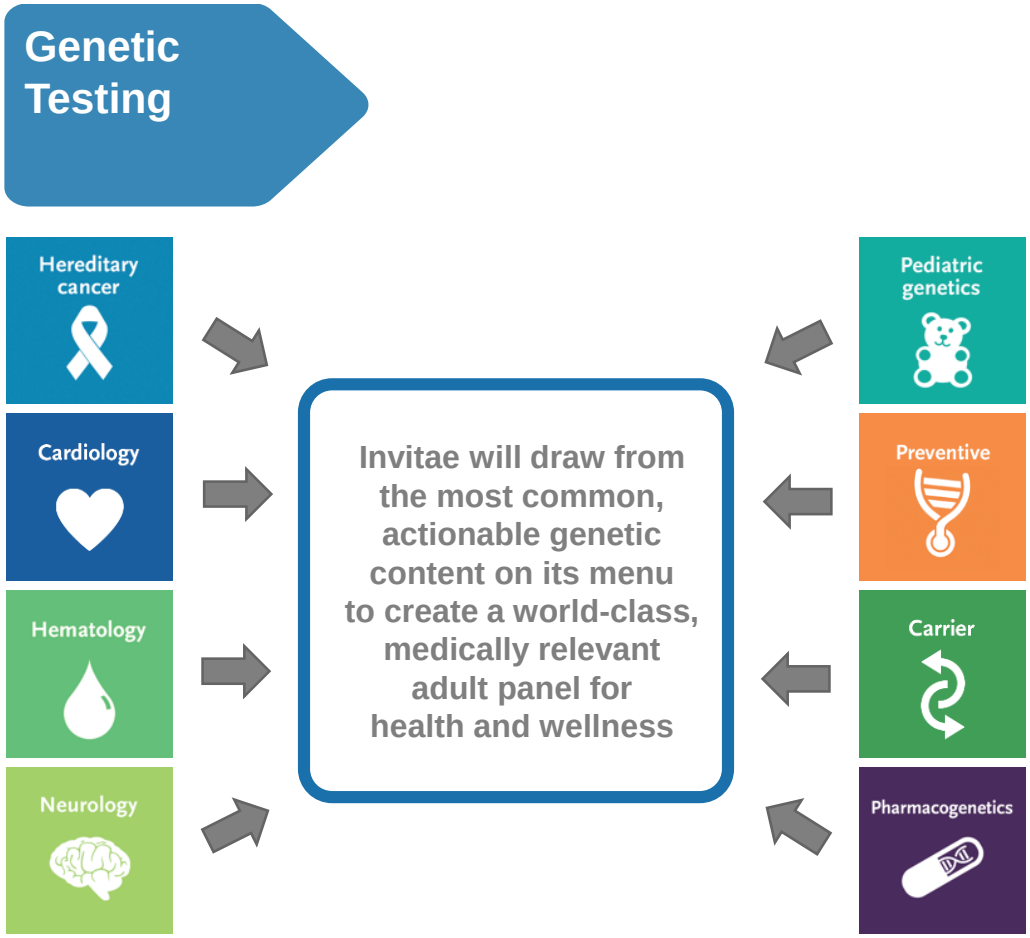
Expanded test menu fuels Genome Management and Genome Network milestones



H1 2016 — Evaluating risk for medically actionable disorders in healthy adults

2017 — Testing genes for recessive variants in individuals interested in pre-conception and family risk assessment

2017 — Testing specific genetic variants linked to drug efficacy

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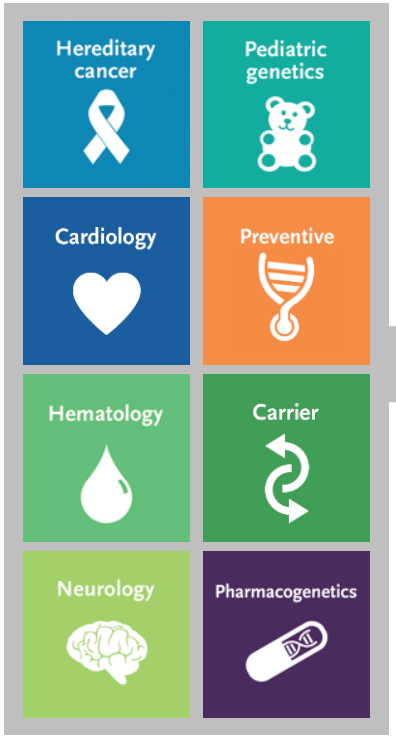
Expanded test menu fuels 2016 Genome Management and Genome Network milestones

Genetic Testing



Genome Management

Utilize our expanded content to launch our first health and wellness program, the adult prevention panel

Genome Network

Launch participatory research study networks:

- Adult prevention research network
- Oncology research network
- Cardiology research network

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Invitae's vision: building a customer for life

Genomics-informed medicine over the course of a patient's lifetime

STORE	Simply store your genetic information
LEARN	Understand more about your genome
SHARE	Family members, physician, networks, no-one
PARTICIPATE	Research, development, clinical trials, marketing
DONATE	Medical research, genomic philanthropy

Patients own and control their own genetic information

Genome Management

NEONATAL	Newborn screening
MEDICAL CONDITION	Clinical diagnostics
MEDICATIONS	PGx screening
HAVING KIDS	Carrier testing
INJURIES OR SURGERIES	Bleeding disorder screening
HEALTH ISSUES	Focused clinical trials
AGING GRACEFULLY	Preventative health

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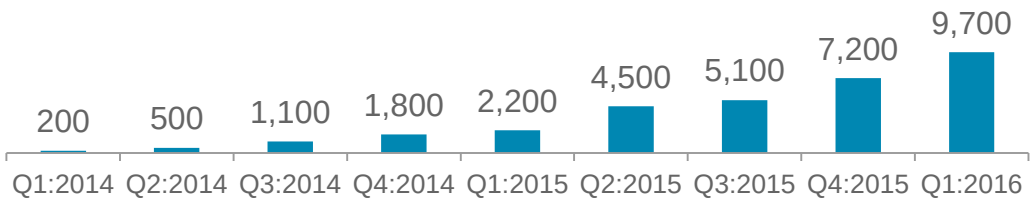
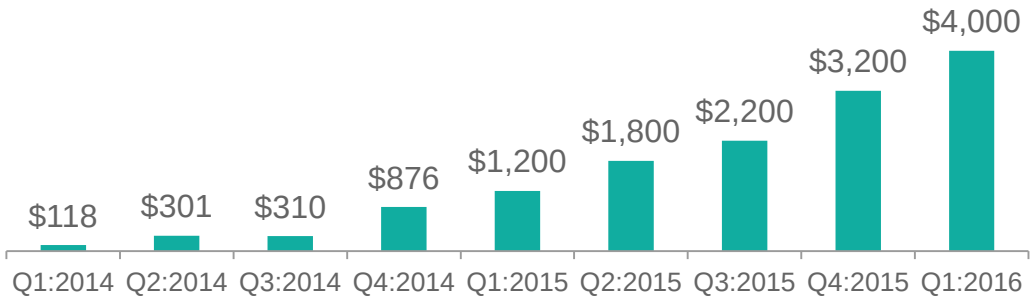
Financial summary

Billable tests



Revenue ($k)



- Expenses are incurred for tests in the period in which the test is conducted
- Balance sheet cash and cash equivalents of $108.7M as of March 31, 2016
- *Note: billable test numbers and revenues are approximate*

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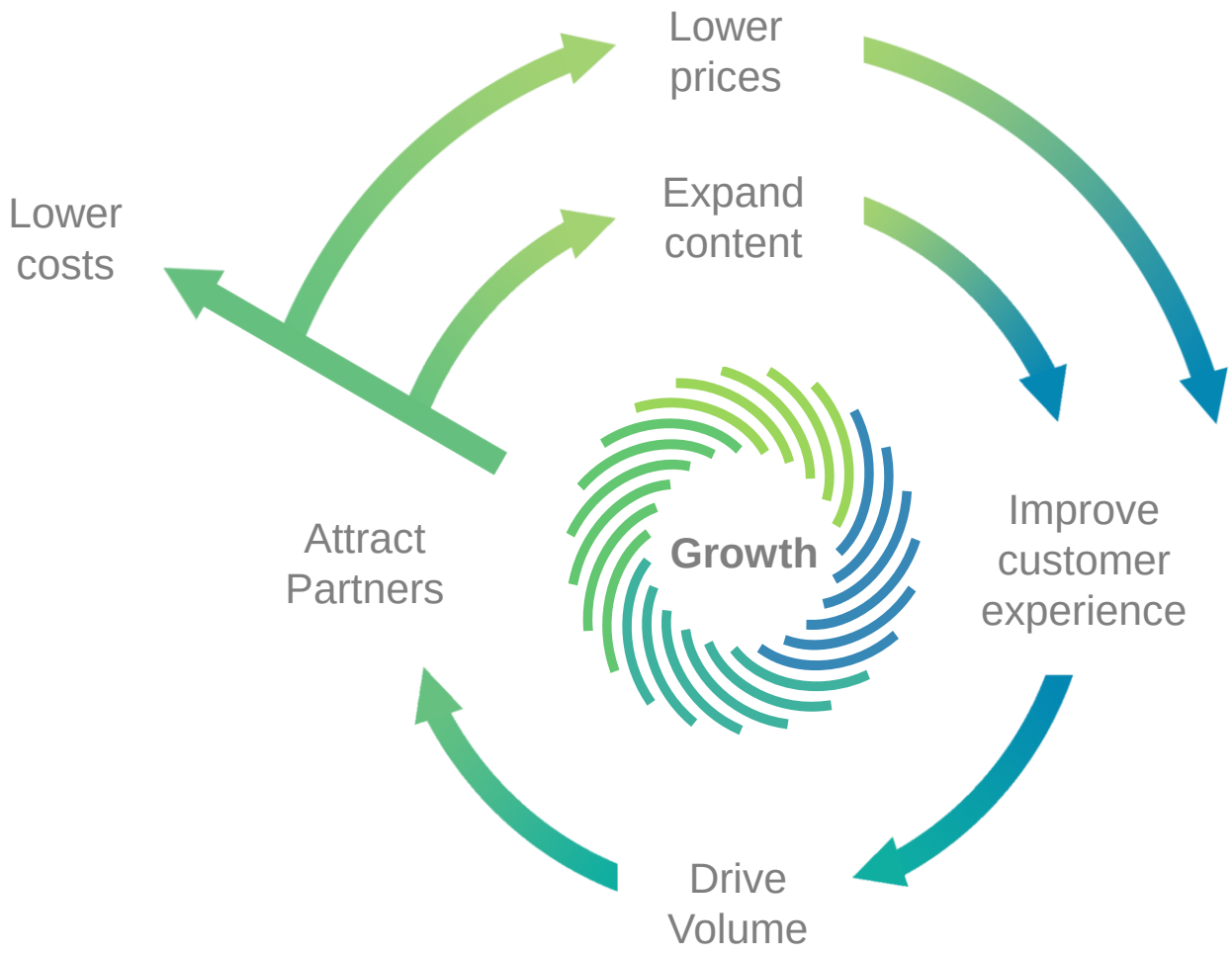
Invitae's flywheel for future growth



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