Complete genomics

The Leader in Whole Human Genome Sequencing

March 2012

Safe Harbor Summary

This presentation contains forward-looking statements about Complete Genomics, Inc. including, with respect to our future genome sequencing capacity, future market size, and number of genomes sequenced. Our actual results could differ materially from those discussed due to a number of factors, including but not limited to the ability of our technology to achieve and sustain sufficient market acceptance, the growth of markets for analysis of genetic variation and biological function, the shift of these markets to whole human genome sequencing, our ability to significantly increase the production capabilities of our genome sequencing service, our ability to convert backlog orders into revenue, and our ability to manage our rapid growth. Additional risks and uncertainties are described more fully in the Risk Factors in our Form 10-K and Form 10-Q filed with the Securities and Exchange Commission. We are providing this information as of the date of this presentation and do not undertake any obligation to update any forward-looking statements contained in this document as a result of new information, future events or otherwise.

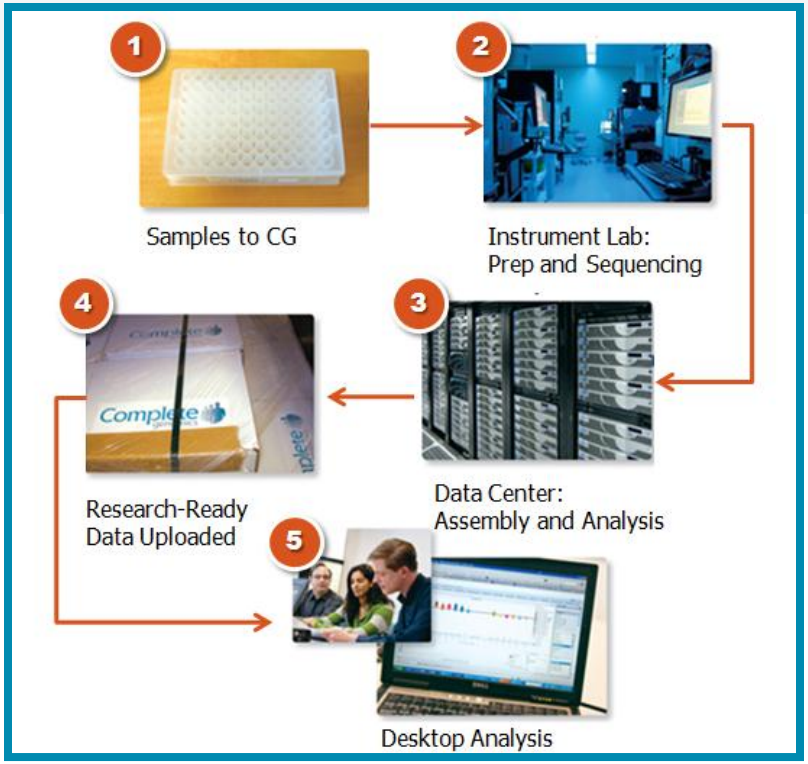
The Leader in Whole Human Genome Sequencing

Proprietary Sequencing Technology

Designed and Optimized for Whole Human Genome Sequencing **Quality**, **Cost** and **Scale**

Outsourced Business Model

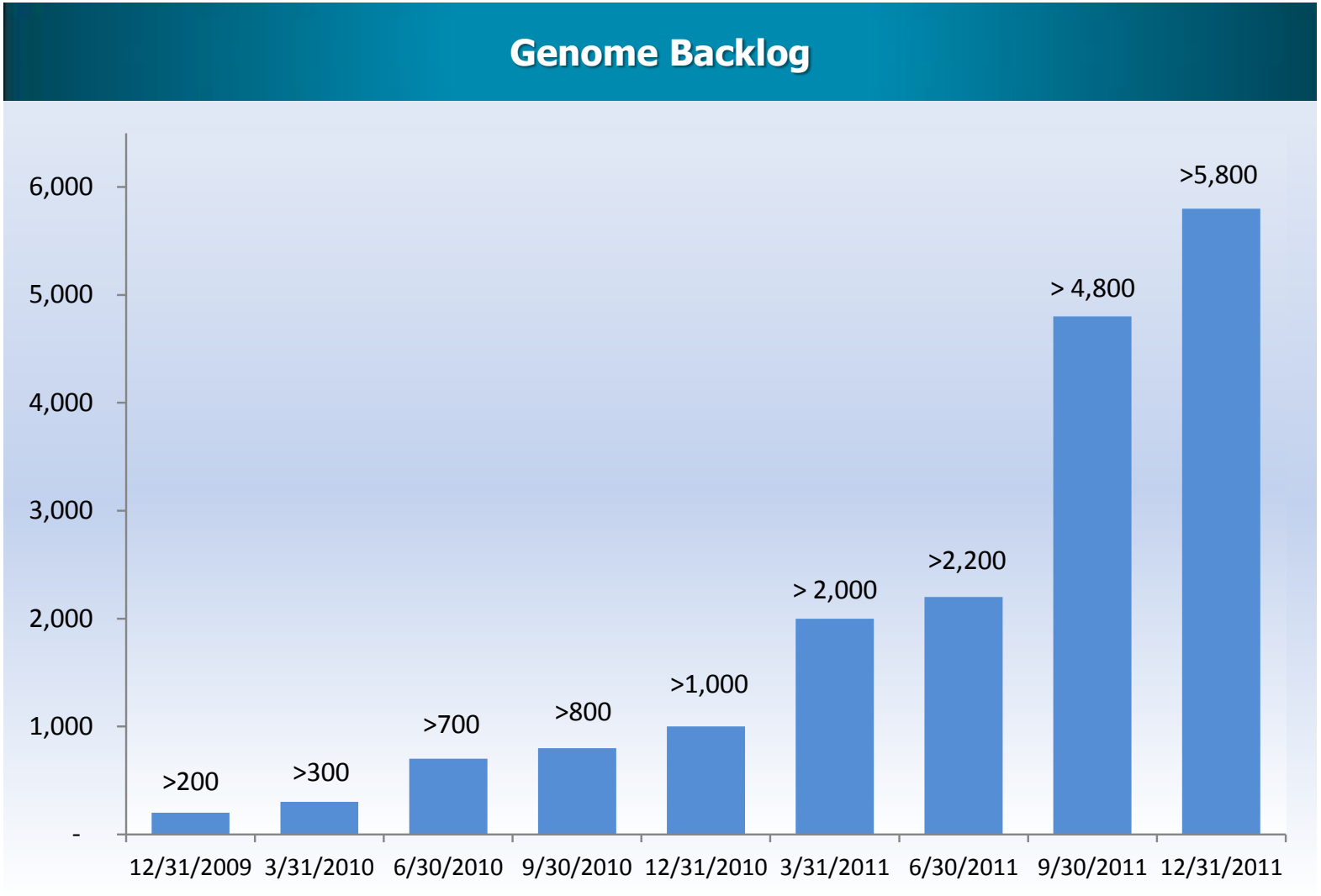
A Turnkey Service Enabling Customers to **Outsource** WGS – Samples In, **Research Ready Data** Out



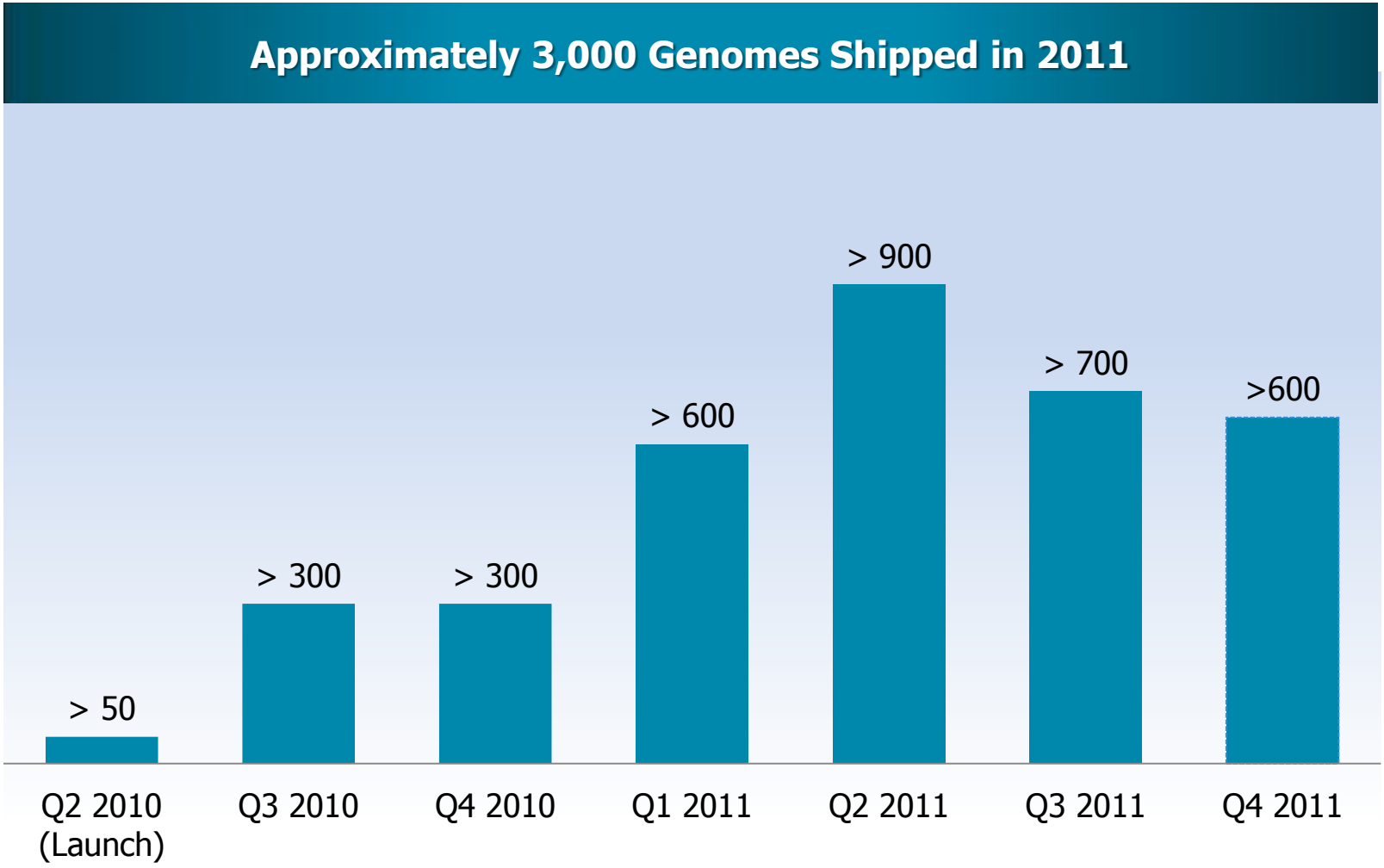
2011 Financial Highlights

Year Ending December 31, 2011	
Revenue	$19.3M
Operating Loss	$69.3M
Cash	$83.1M
Debt	$23.3M

Growing Genome Backlog



Genome Shipments



Diverse Base of 125+ Customers

Complete genomics

Academic/ Government

National Cancer Institute
The University of North Carolina at Chapel Hill
Broad Institute
Stanford University
UCSF
The University of Texas Health Science Center at Houston
Yale University

Medical Research Center

ICR The Institute of Cancer Research
Ernest Gallo Clinic and Research Center at the University of California, San Francisco — New Therapies from Discovery in Molecular Neuroscience™
UCSF
amc — Academisch Medisch Centrum Universiteit van Amsterdam
UT Southwestern Medical Center
VIB
Institute for Systems Biology
Harvard Medical School

BioPharma

Lilly
Pfizer
Genentech — In Business for Life

Translational Medicine/Clinical Research

BWH Brigham and Women's Hospital — A Teaching Affiliate of Harvard Medical School
Mayo Clinic
INOVA Health System
The Children's Hospital of Philadelphia®
Children's Hospital Boston
Dana-Farber Cancer Institute
Scripps Translational Science Institute
Erasmus MC

Example Research Applications

Cancer	• NCI: pediatric cancer (TARGET) • Genentech: Hepatitis B Virus (HBV) infection and HCC • AMC: Neuroblastoma
Mendelian Diseases/ De Novo Mutations	• ISB: Miller's Syndrome • U of Arizona: Infantile Epileptic Encephalopathy • Erasmus: Craniosynostosis
Genomic Variation and Disease	• T2D - GENES: Type II Diabetes risk in families • Stanford: Genetic Determinants of Diabetes Risk • Scripps Health: Clinical Annotation of Novel Variants (Cypher)
Translational Medicine	• Inova Health System: Pre-term Delivery Study • Mayo Clinic: Translational genomics for guiding patient care • USTW: Hypercholesterolimia

Delivering High Quality Results

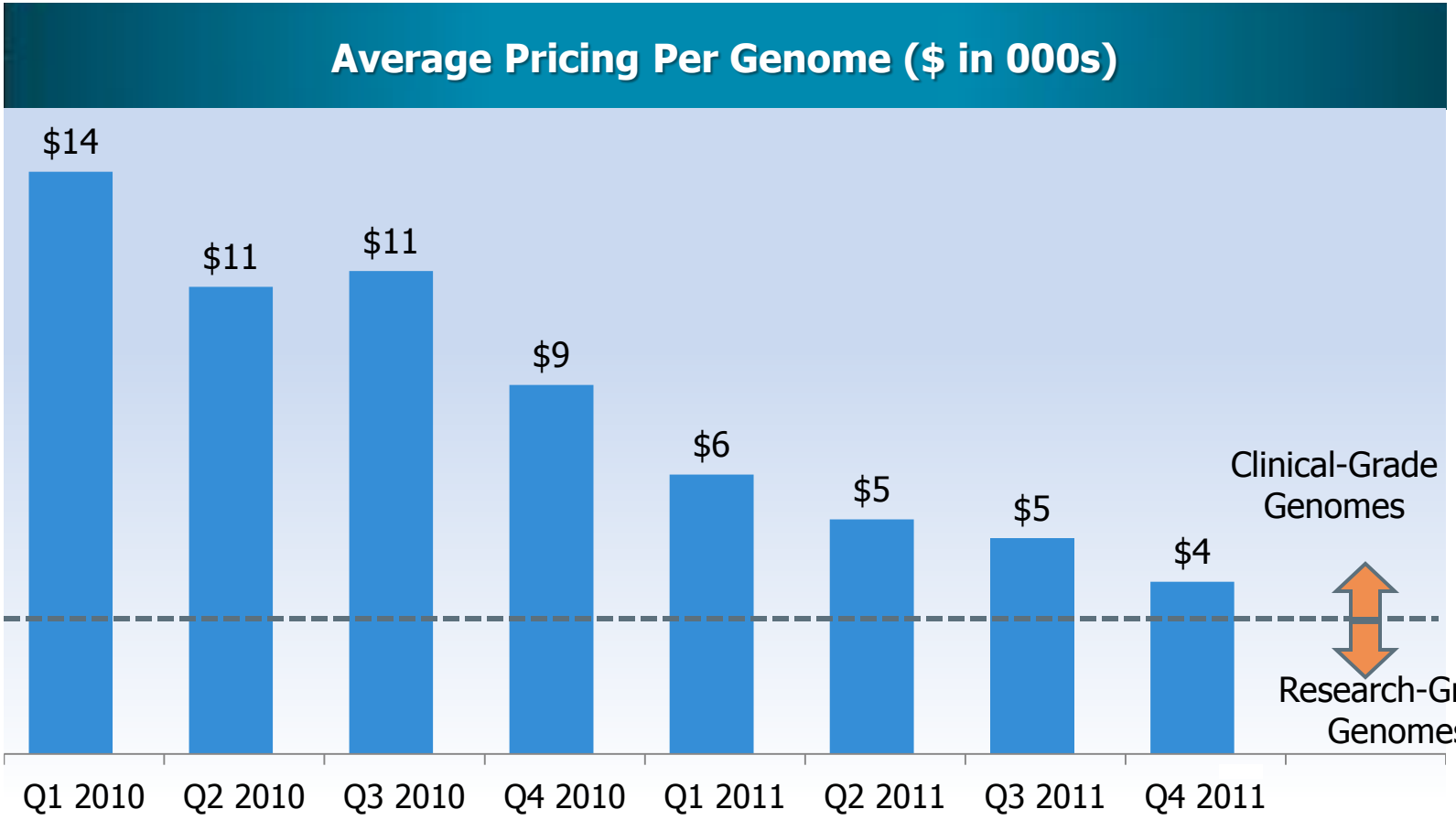
Accuracy	99.999%
Median Genome Read Coverage >10X	>98%
% of Genome called	>96%
% of Exome called	>97%

Note: Data for genomes shipped in Q42011.

Delivering Speed at Scale

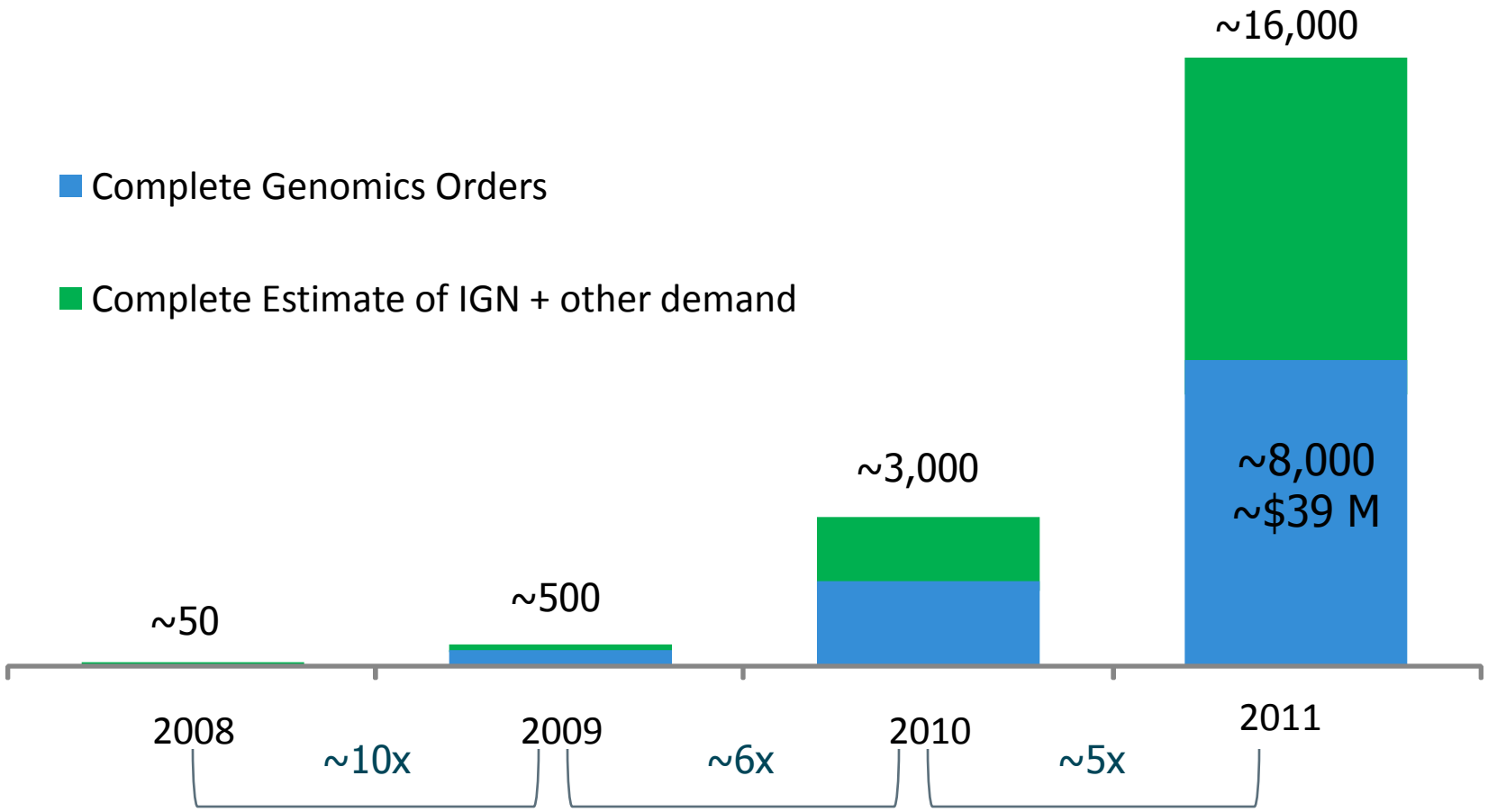
Q4 2011 Median Turn-Around Time	72 days
End Q1 2012 Capacity	~1000 Genomes Per Month
End Q4 2012 Capacity	~2000 Genomes Per Month

Pricing Evolution



* $5K for orders less than 50, $4K for orders greater than 50, with further discounts for large orders

Estimated Whole Human Genome Demand



Sources: Company estimates, Illumina press releases, Nature: "The Genome at Ten", Nature: "Genomes by the Thousands"

Emergence of the Outsourced Whole Genome Sequencing Market

Complete genomics

Small Projects and **Small** Infrastructure

Thousands of academic cores & commercial labs worldwide

- Growing market, well-served by new and existing instruments

life ion torrent technologies

illumina MiSeq

Roche 454 SEQUENCING

Oxford NANOPORE Technologies

Large Projects but **Small** Infrastructure

Targeting ~1,000 top human disease research labs

- Not served by instrument vendors
- Genome center collaborations or inferior research methods (SNPs, exomes, ...) are unattractive
- Three Key Requirements: **Low Cost**, **High Quality** and **Fast Delivery at Large Scale**

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ign Illumina Genome Network

华大基因 BGI

Large Projects and **Large** Infrastructure

Large Genome Centers: Broad, WashU, Baylor, Sanger, ...

- Traditional leaders, now shrinking (NHGRI funding)

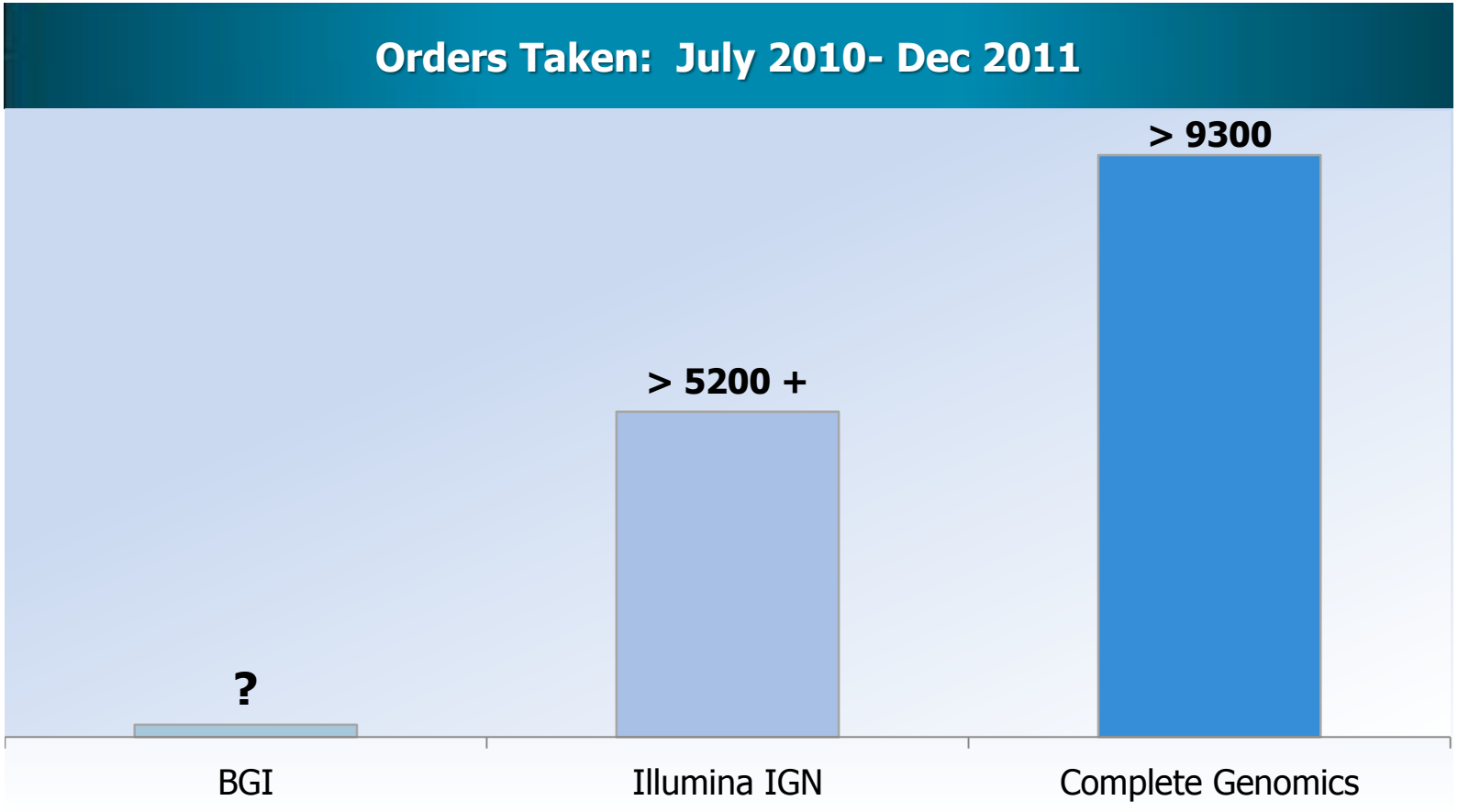
life SOLiD technologies

illumina / HiSeq

Uniquely Positioned Among CHGS Outsourced Service Providers

	Defining Characteristics	Commercial Implications
Complete genomics *Proprietary Platform*	• Only focused and optimized WGS technology • Only automated factory production model	• Achieves superior performance (quality, cost and scale) for WGS
ign Illumina Genome Network *HiSeq Instrument*	• General purpose instruments designed for wide range of sequencing applications	• Lower performance for WGS than optimized offering
华大基因 BGI *ILMN HiSeq* / *LIFE SOLiD* / *Roche 454* / . . .	• Low-cost labor and third-party general-purpose instruments	• Margin stacking severe competitive disadvantage

Capturing Significant Share of the Outsourced WGS Market



Source: Illumina announcements from 05/09/11, 7/26/11, 8/3/11, and 10/25/11 and 1/10/12

Published Comparison Paper: "Complete More Accurate Than Illumina"

nature biotechnology *(18 Dec 2011)*

Performance comparison of whole-genome sequencing platforms

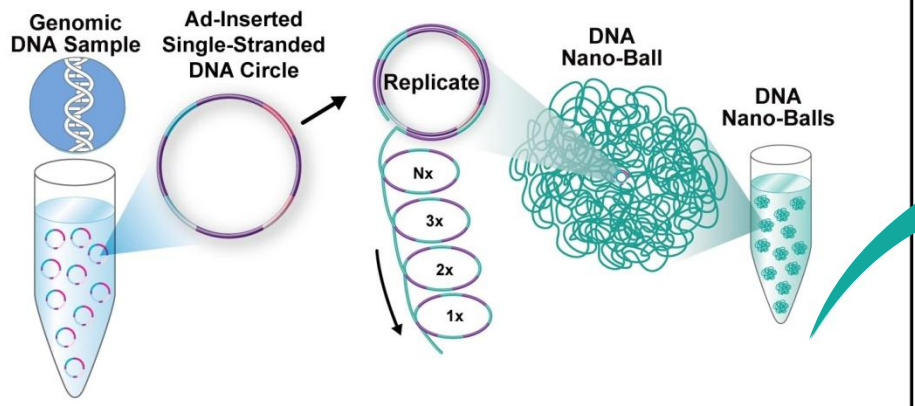
Hugo Y K Lam[1,8], Michael J Clark[1], Rui Chen[1], Rong Chen[2,8], Georges Natsoulis[3], Maeve O'Huallachain[1], Frederick E Dewey[4], Lukas Habegger[5], Euan A Ashley[4], Mark B Gerstein[5–7], Atul J Butte[2], Hanlee P Ji[3] & Michael Snyder[1]

Lam/Snyder: "Based on the transition/ transversion ratio and Sanger sequencing, **CG** appears to be **more accurate**, but also slightly less sensitive."

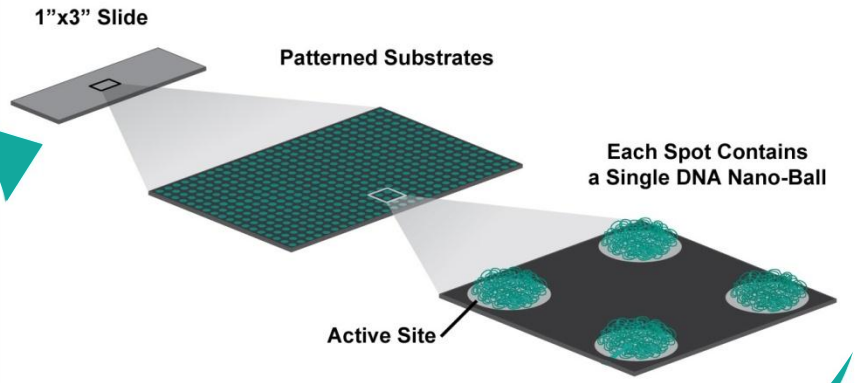
Complete: Based on Sanger validation, Complete has **1/50th as many errors** as Illumina, and is **more sensitive** (finds ~48,000 more true SNPs) than Illumina

Technology: Highly Scalable WGS and Cloud-Based Delivery

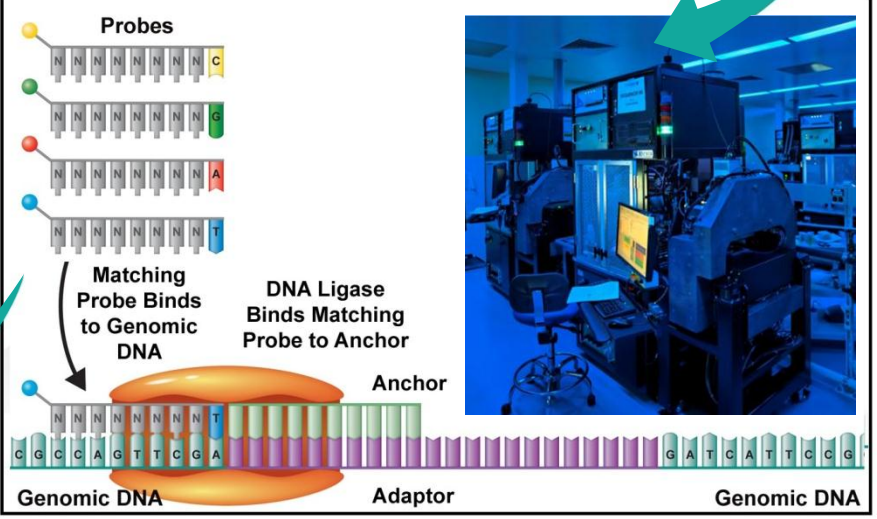
1. Sample Prep and Library Construction



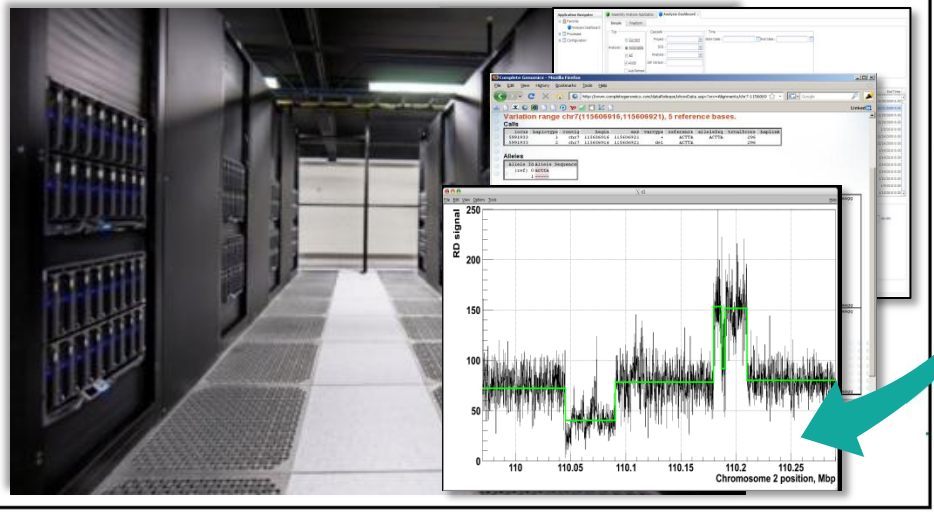
2. Self-assembling Nanoarrays



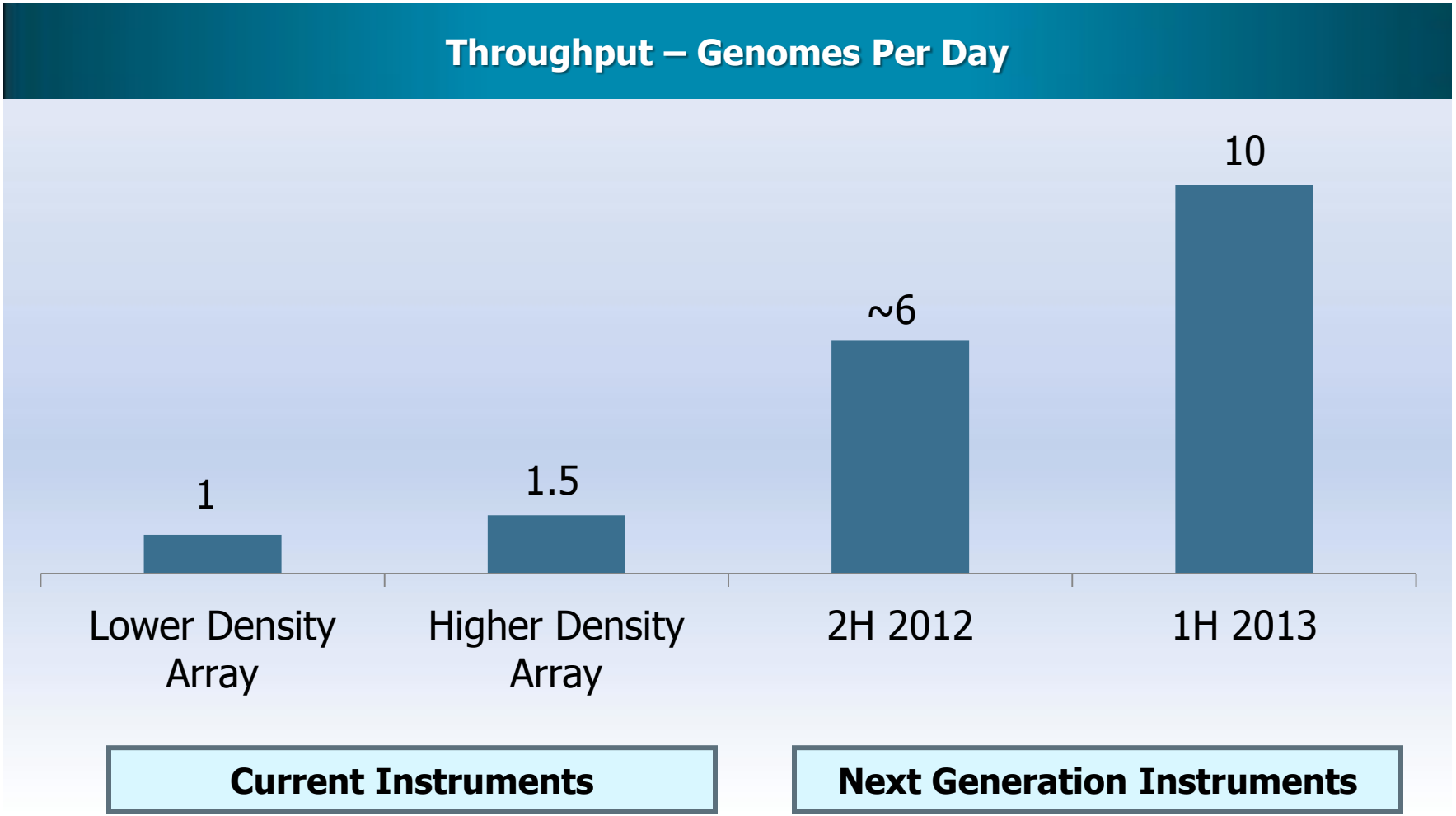
3. Combinatorial Probe-Anchor Ligation (cPAL™)



4. Imaging, Assembly and Analysis

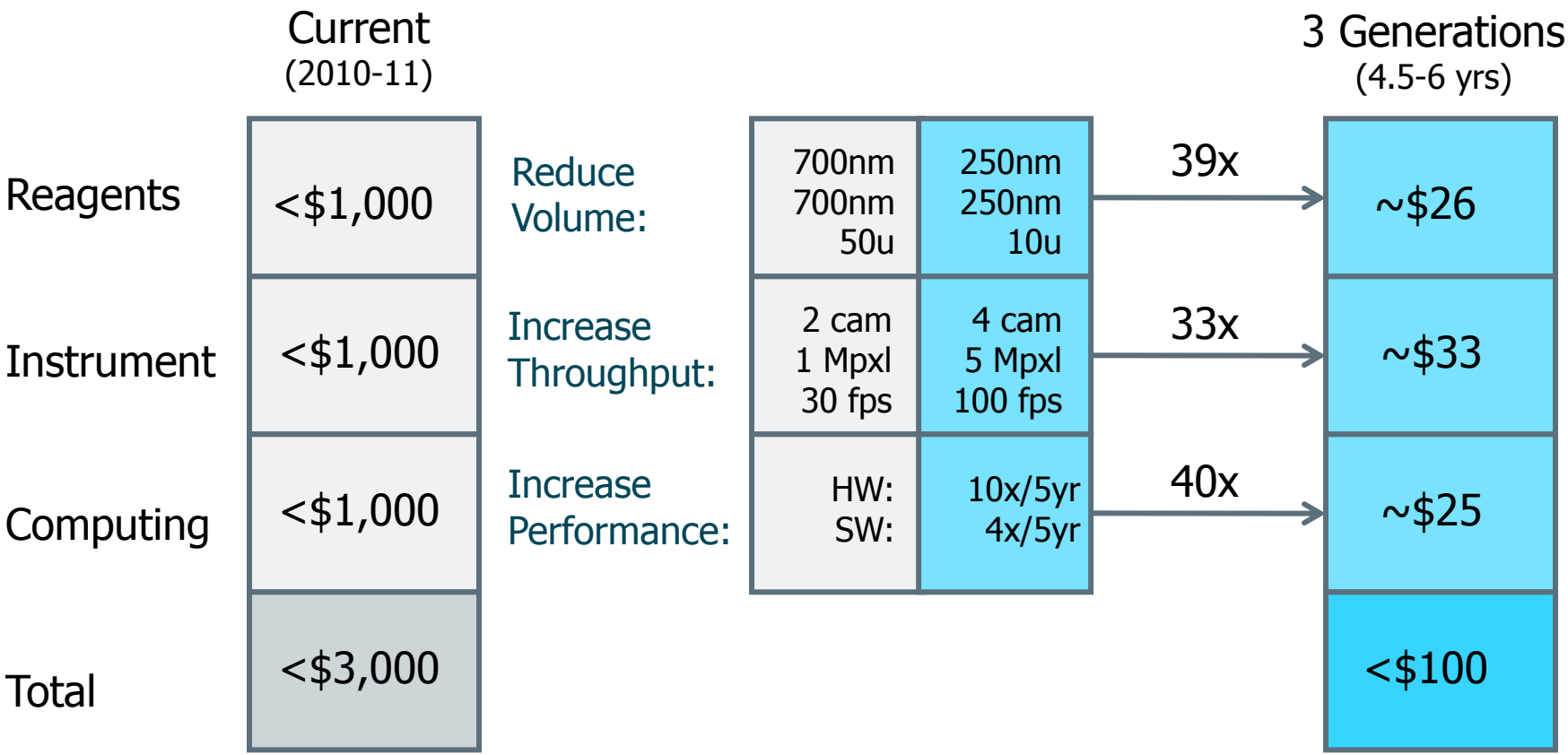


Driving Up Scale:
Projected Instrument Throughput Increases



Driving Down Cost: Long-Term Cost of Core Technologies

Continued Engineering Improvements Reduce Sequencing Costs

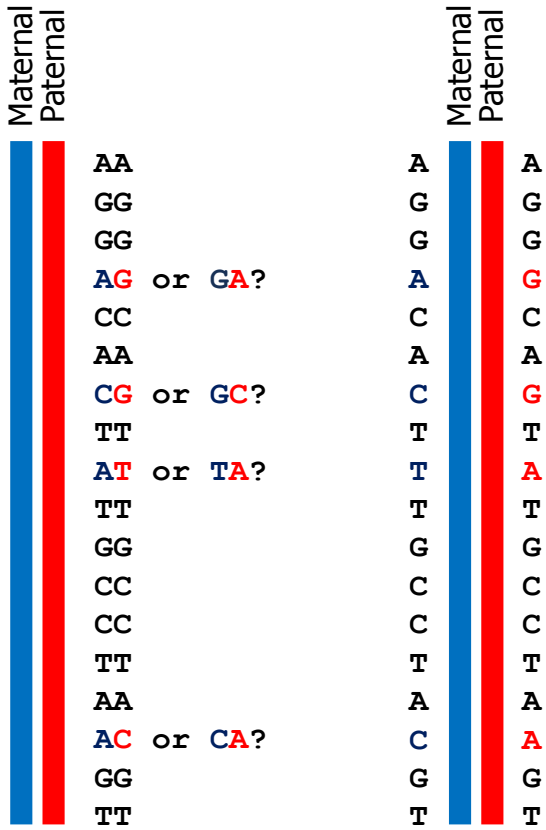


Sample Prep Costs Reduced by Automation and Multiplexing Large Batches
Other Costs (QC, Validation, Sample Handling, Analysis) Will Dominate

Driving Up Quality: Long Fragment Read Technology

Separate Maternal and Paternal Chromosomes

Current WGS Technologies



Long Fragment Read Technology

Patented Method

- Fragment to ~100,000 base fragments
- Tag (bar code) each fragment
- Chemistry: all fragments the same (low cost)
- Informatics: analyze each fragment separately

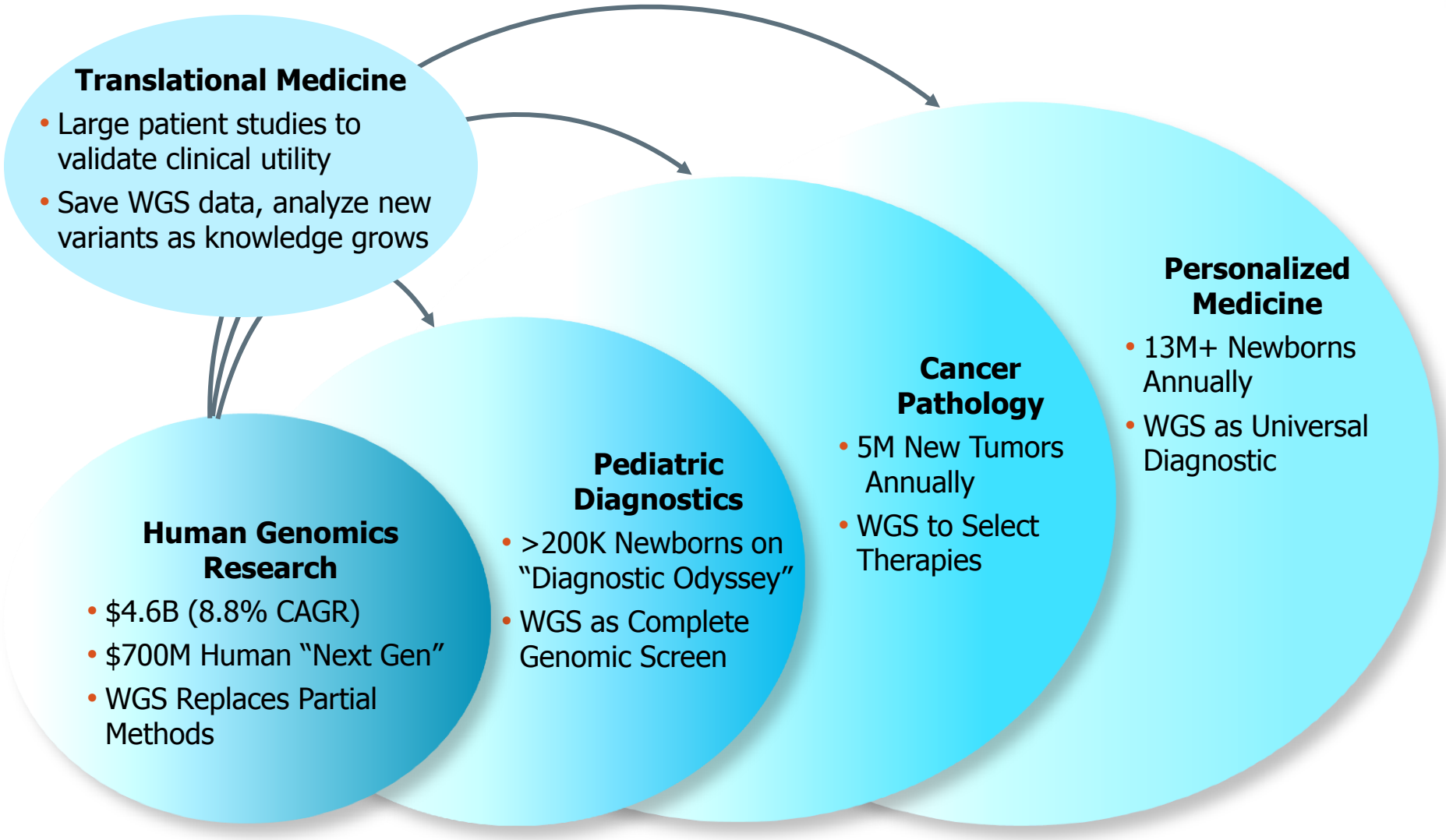
Advantages of Virtual 100Kb Reads

- Separates ("phases") maternal and paternal chromosomes
- Resolved distributed repeats (e.g. pseudogenes)

Achieves Clinical-Quality Genomes

- Clinical-quality genomes will be phased (required to understand multiple mutations)

Multiple Large Market Opportunities



Sources: Scientia Advisors 2009; CISCRP.org, BCC Cancer Profiling Report 2010; AACR Cancer Statistics, American Cancer Society: Global Cancer Facts & Figures 2007, US Census Bureau

Long Term Business Model

Long-Term Business Model Target	
Gross Margins	65-70%
R&D as % of Revenue	20-25%
SG&A as % of Revenue	20-25%
Operating Margins	20-25%

Annualized Revenue Breakeven Targets	
Gross Margin	$40-50M
Operating Margin	$140-160M

Investment Highlights

Compelling Customer Value	• Combines Ease of Outsourcing with Quality, Cost, and Speed of Specialized Technology and Factory Automation
Proven Customer Adoption	• Approximately 8,000 Genomes Ordered in 2011 and Over 125 Customers Since Beginning Commercial Ops
Strong Competitive Position	• Leader in Outsourced WGS, Sustainable Through Focusing Strategy and Resources 100% on Outsourced WGS
Efficient Production Model	• Deploying in 2012 new 6-10 genome/day instruments; 50 Instruments @ 10 Genomes/Day = 150K Genomes/Yr
Large Expansion Opportunities	• Expand within $4.6B Research Market and into Much Larger Clinical Markets, Including Cancer Pathology and Diagnostics

Sources: Scientia Advisors, 2009; BCC Cancer Profiling Report, 2010

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