QIAGEN Bioinformatics Discovery Services
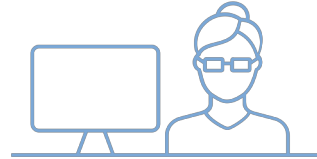
Hrisavgi Kondilis-Mangum, Ph.D., Discovery Services Product Manager

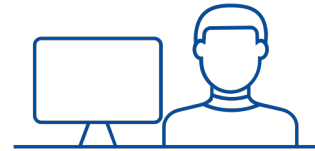September 18, 2019

IPA and OmicSoft User Group Meeting

Who we are – a collection of scientists who help our customers achieve their goals
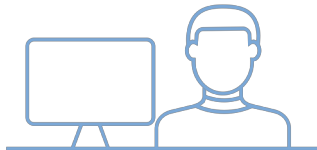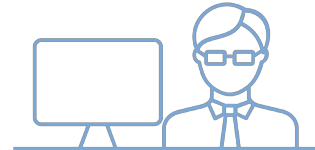
Project Manager

Bioinformatician

Developer

Computational Biologist
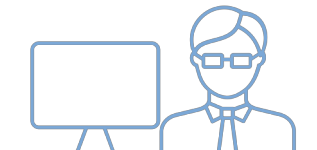
Geneticist

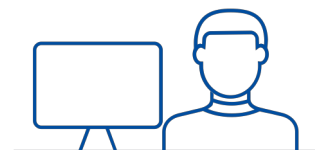Oncologist

Pipeline Developer

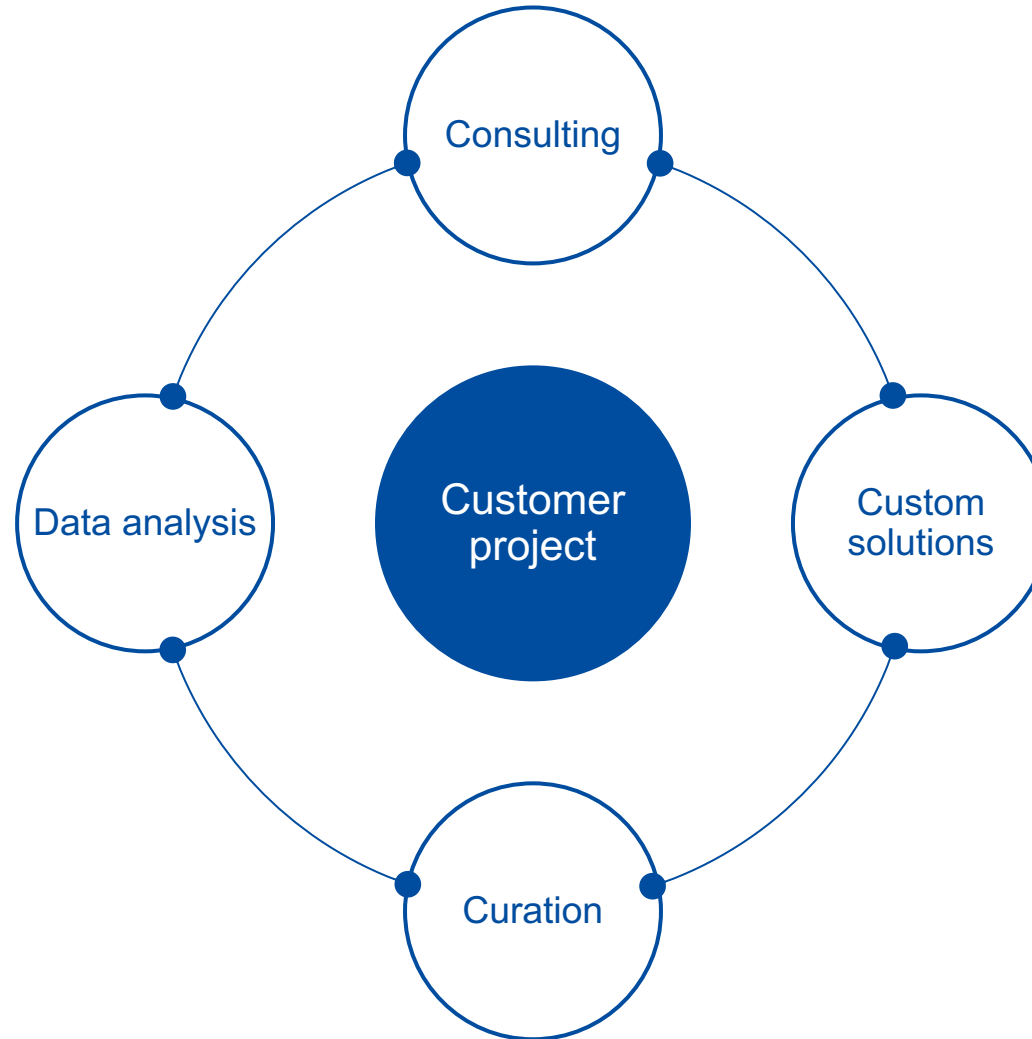API Specialist

Expert Curator

Security Expert

Project Manager

Microbial Specialist

What we do – tailor bioinformatic services to ensure high-quality data

Bioinformatics and scientific consulting

Summary: We work with you to create tailored solutions to meet your needs. Our bioinformaticians and Ph.D. qualified scientists help you develop the informatic tools you need to get clear, unbiased results.

Current offerings:

1. Virtual FTE
   - Server maintenance
   - Cross services projects
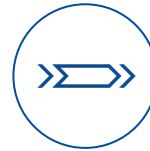
2. Pipeline integration
   - OmicSoft pipeline
   - Customers' pipeline
   - CLC pipeline
   - Bioconductor R packages
   - IPA integration
   - Python API
   - And other external tool integrations

Complete data analysis service

**Summary:** Our experts partner with you, whether to explore biological pathways, identify causal variants, explore large-scale NGS population studies or work with a clinical research organization (CRO) to deliver large-scale data analysis.

Current offerings:

1. Internal data or public data processing

   - OmicSoft Array Studio
   - Genomics Workbench
   - Publicly available workflows
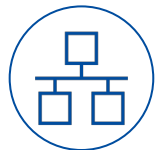
2. Secondary data analysis for pathways and biomarkers using

   - Ingenuity Pathway Analysis (IPA)
   - OmicSoft
   - Publicly available resources

3. Data storage and visualization creating a custom OmicSoft Land

   - From raw or pre-processed data files
   - Can be combined with custom metadata curation service
   - Can add pre-computed statistical models
   - Share data with collaborators using Land Explorer

Custom data curation

Summary: We work with you to create custom curated content, fully connected to the Ingenuity Knowledge Base and/or OmicSoft Lands. We are built on decades of in-depth content curation.
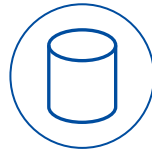
Current offerings:

1. Internal data or public data processing

   - OmicSoft Array Studio

   - Genomics Workbench

   - Publicly available workflow

2. Building customer specific ontologies

3. Custom templates for metadata collection at the bench

Custom bioinformatics solutions

Summary: If you need to tailor a plugin, integrate software with other platforms or need to work with new tools, the Custom Solutions team is ready to deliver.

Current offerings:

1. Antibody Analysis Suite
2. HLA typing
3. CRISPR assays
4. Integration with customer databases
5. Data migration

6. CLC Plugin development for Genomics Workbench and Genomics Server
   - Tailored import and export for custom data types
   - Custom reports in customer specified formats
   - Advanced workflow tools

Example project

Customer need: data processing, metadata curation, data analysis, data interpretation, data storage, data sharing
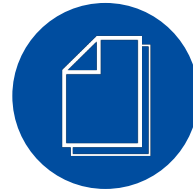
Pharma X is conducting a clinical study with both RNA-seq and exome-seq planned as part of the protocol
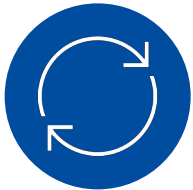
Processing of RNA-seq and exome-seq data using both QIAGEN bioinformatics tools, including OmicSoft, IPA and in-house analysis tools (R package)

Curate metadata using OmicSoft controlled vocabular

Delivered in report format, as required by vendor, along with customer-specific data

Pharma X stores the results of the study using in-house databases, and the pipeline for further projects

Sample to Insight

Questions?

Come speak with Neha or Chrys during a break or send an e-mail to **discoveryservices@qiagen.com**

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