QIAGEN Bioinformatics Discovery Services

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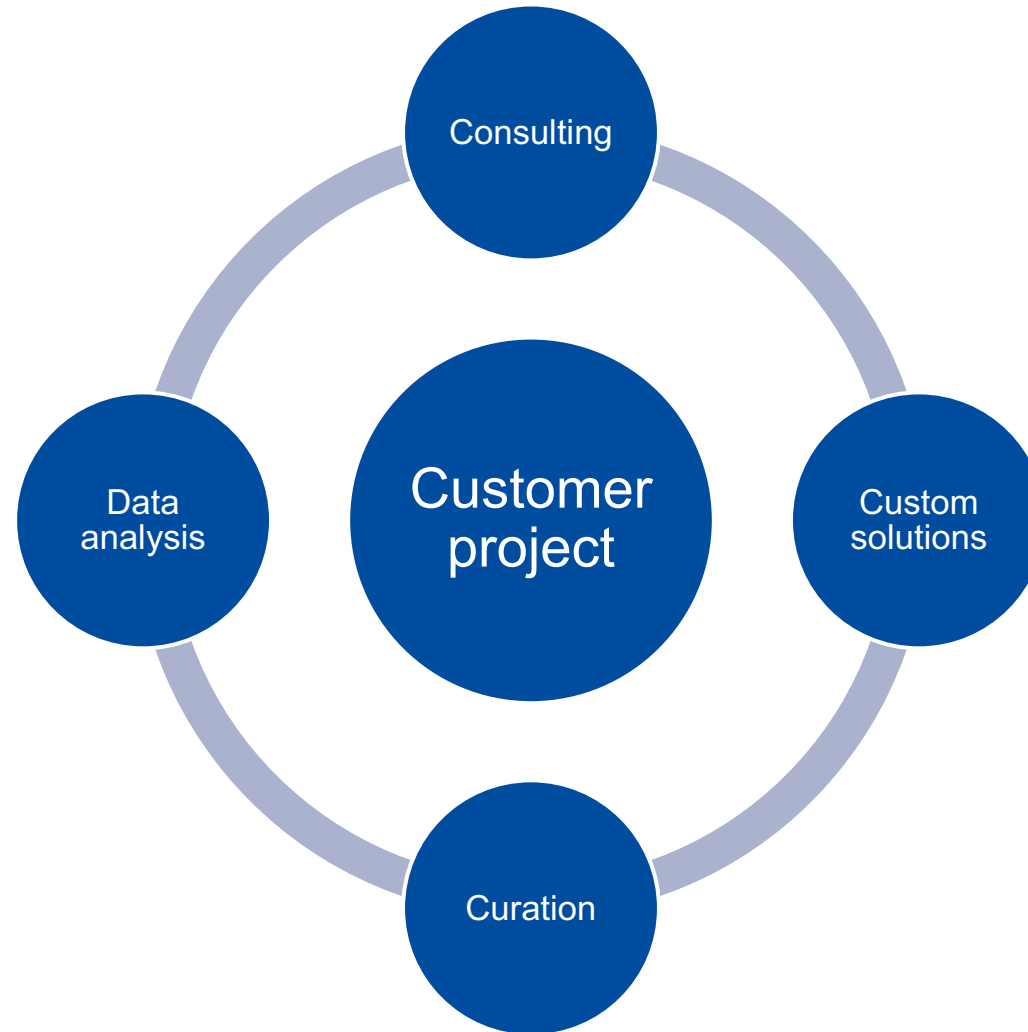
September 17, 2019
IPA and OmicSoft User Group Meeting

Who we are – a collection of scientists that help our customers achieve their goals
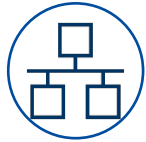
What we do – tailor bioinformatic services to ensure high-quality data processing

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. Secondary data analysis and interpretation using

   - Ingenuity Pathway Analysis (IPA)
   - Ingenuity Variant Analysis (IVA)
   - OmicSoft
   - Publicly available resource

2. Internal data or public data processing

   - OmicSoft Array Studio
   - Genomics Workbench
   - Publicly available workflow

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. Metadata curation using

    •   OmicSoft ontologies

    •   IPA Knowledge Base ontologies

    •   Public ontologies

2. Building customer specific ontologies

3. Custom templates for metadata collection at the bench

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

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, data analysis, data interpretation, data sharing

Customer X is conducting a research study with both RNA-seq and miRNA planned as part of the protocol

Processing of RNA-seq and miRNA data using both QIAGEN bioinformatics tools, including OmicSoft, IPA and in-house analysis tools (R package)

Provide expert interpretation with continuous customer interaction to address the hypothesis/ discovery

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

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

Example Project

Customer need: database (Knowledgebase, Lands) queries, data sharing

Customer X is planning a research study and wants to mine the publicly available data and/or molecule interactions

QIAGEN will create custom queries to mine the internal database eg. projects related to a disease type and/or tissue specific interactions for a protein of interest

Provide expert interpretation with continuous customer interaction to address the questions

Delivered in report format and/or data dump as required by vendor for downstream processing

Questions?
Come speak with Neha or Chrys during a break or send an e-mail to
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