The Biotechnology Resource Center (BRC) is a collection of Core Laboratory Facilities that supports the breadth of life science research at Cornell and beyond. Facilities in Genomics, Proteomics and Metabolomics, Imaging, Flow Cytometry, Biomolecular Interactions and Properties, and Bioinformatics provide services used by hundreds of researchers working in Plant Science and Breeding, Veterinary Medicine, Human Health, Biomedical Engineering and Microbiology among others. Operations are supported by fee-for-service cost recovery and university investment with a total budget of approximately $7mil. The BRC operates as part of the Institute of Biotechnology, a research center in Cornell’s Research Division under the oversight of the Vice President for Research and Innovation (VPRI). In addition to the BRC, the Institute supports economic development and IP/Commercialization activities on behalf of New York State as a designated Center for Advanced Technology.

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# Analyses include:

Financial Analysis:

Actual amount (price \* quantity)

Billed amount (does not include subsidies)

Usage analysis:

Units of service performed

Attributes the Director is interested in filtering and aggregating by include: Year/Month/Quarter, facility group, facility, service, PI, PI institution, PI department/org (if Cornell), PI college (if Cornell)

Analysis of customer scheduling behaviors. (only go back 1 year) Are some customers gaming the system?

How far in advance are reservations made? How many changes are made to reservations?

How far in advance are reservations schedules changed? How far in advance are reservations canceled?

Number of reservations by, customer, college, etc. Along with percent cancelations, and average lead time to cancelation.

# Source Data:

The Biotechnology Resource Center uses an internally developed system called LIMS “Laboratory Information Management System” to support the many aspects of ordering, processing and fulfilling lab requests. A sample of information tracked in the LIMS system include: lab order requests, facility where request processed, client, lab scheduling, invoice and line item detail pricing.

Data from the LIMS tables are being profiled and processed on SQL. Preliminary analysis of the data were conducted.

# LIMS data info (processed):

Tables:

facilities – table of facility with primary keys referenced in other tables like b\_invoice

b\_invoice – invoice records – institution, dept etc are looked up at creation time (not just a relation because PIs and customers can move affiliations)

b\_lineitem – lineitems related to invoices clients – our customers related to pis institution

countries department

pis – all customers have a PI, PIs have institution, country, department

orders – not all invoices have orders – this is key for facility ‘3’ though which would be used for sanger turnaround times (cidate, citime, distdate,disttime)

sched\_inst - instrument record for scheduling sched\_event - appointments

sched\_audit - log: creations, changes, cancellations

sched\_rates - not certain this is relevant, will have to check with developer. lots of the scheduling code was refactored and this could be a product of that.

sched\_reconcile - not certain this is relevant, will have to check with developer. lots of the scheduling code was refactored and this could be a product of that.

Facility ID key (these groupings are useful for summary data and are not reflected in the database)

Genomics Facilities: 2,6,7,8,13,20,26,29,30,31,37,301,302

Proteomics-Metabolomics: 10,43

Flow: 308

Imaging: 4,36,39

Bioinformatics: 3,32

Epigenomics: 309

Genomics innovation: 310

TREx: 44

BIP: 312

Parking: 311 All Facilities

(2,3,4,6,7,8,10,13,20,26,29,30,31,32,36,37,43,44,301,302,308,309,310,311,312)

all other facility IDs can be excluded for this project

# Filtering Intra-Facility Invoicing:

When reporting Revenue on an aggregate facility (e.g. Genomics), we should not report dollars charged by one facility (e.g. 302-genomics) to another facility (e.g. 37-Genomics Large Projects). At this time, this is important ONLY for the “Genomics” aggregate

Example tableau calculation to identify those:

IF ([Facility Id] = 2 OR

[Facility Id] = 5 OR

[Facility Id] = 6 OR

[Facility Id] = 7 OR

[Facility Id] = 8 OR

[Facility Id] = 13 OR

[Facility Id] = 14 OR

[Facility Id] = 20 OR

[Facility Id] = 26 OR

[Facility Id] = 29 OR

[Facility Id] = 30 OR

[Facility Id] = 31 OR

[Facility Id] = 33 OR

[Facility Id] = 34 OR

[Facility Id] = 35 OR

[Facility Id] = 37 OR

[Facility Id] = 301 OR

[Facility Id] = 302

)

AND (CONTAINS([Payment Number],"U353809") OR CONTAINS([Payment Number],"U353803") OR CONTAINS([Payment Number],"U354300")) THEN "True" ELSE "False" END

# Calculating amount billed:

b\_lineitem.line\_total\_raw is the total revenue generated by a line item. This amount is used in reporting revenue

b\_lineitem.line\_total is the ‘line\_total\_raw’ minus the ‘subsidy\_amount’ i.e. the amount the customer paid directly. This and b\_lineitem.subsidy\_amount can be useful in reporting the amount of revenue coming in directly from customers vs. that which comes from a user subsidy.

# Subsidies:

NYS Companies and companies housed in our Center for Life Science ventures (business incubator) receive a subsidy where a portion of the cost of a service is covered from a fund source other than direct payment from the company.