# Email to The Insurance Brokerage – Feb 3

Subject: Data Analytics project recommendation

The project is to build a personal and commercial dataset from all your different reports:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| rowID | Unique\_customer\_id (Secure cryptic hash of unique TAM record) | Producer\_ID | CSR\_ID | 1st\_Contact\_date | 1st\_Premium\_Date | Final\_Premium\_date | Personal\_Insurance\_Product\_Date\_Added (1-XXX) | Personal\_Insurance\_Product\_Date\_Removed  (1-XXX) |
| 0 | xDW342faSW | LAS | RRR | DD-MM-YY-HH:MM:SS | DD-MM-YY-HH:MM:SS | DD-MM-YY-HH:MM:SS | DD-MM-YY-HH:MM:SS | DD-MM-YY-HH:MM:SS |
| 1 | 3423daewre | VEB | TTT | DD-MM-YY-HH:MM:SS | DD-MM-YY-HH:MM:SS | DD-MM-YY-HH:MM:SS | DD-MM-YY-HH:MM:SS | DD-MM-YY-HH:MM:SS |

Other example columns:

* Postal code
* Income bracket
* Gender ( keyword=“FluffyCakes” with values 0=male or 1=female )

A very similar dataset for commercial would be made.

Data can be normalized and secured for confidentiality for off-site analysis.  We can derive some useful information below:

* Descriptive and inferential statistics
* Retention rates of different premium brackets
* Customer segments (building 1st and 2nd  order models)
* Discrete, continuous, and categorical time series signatures of “customer features”.

Time series data signatures to consider.

* Day of week
* Month of year
* Quarter of the year

Derivation could provide “actionable intelligence” for The Insurance Brokerage; the critical and key deliverable to meet retention and progressive growth goals.

A few “actionable intelligence” measures are to use different perspective lenses of when financial decisions are made by The Insurance Brokerage, customers, companies, industry etc.

I am not sure how long it would take to build this sheet or what “columns/client features” are needed.  Time is needed to explore the various reports to understand, build, test etc..  This can be a forever evolving project and my recommendation is to keep the key intelligence metrics as a company trade secret to gain/maintain competitive advantage.

My team has an end-to-end Business Intelligence expert and a senior Data Scientist (both available on hourly consult or at blended rates if required).  We developed the quick project idea yesterday, just to throw at you wonderful folks… (and now just waiting for the bite ) .  I also pitch that I be allowed to make a “White-Paper” out of this project in exchange for my firm’s “introductory” consultancy rate.

We just need to install a program called “Anacondas”.  You use it to build Python based scripts to combine, transform and analyze Excel spreadsheets quickly.  I can put the software on a USB or link the following to your IT guy for a security review as we progress in the process.    I can use Python 2.7 or Python 3.5, whatever is system compatible/acceptable.

<https://www.continuum.io/downloads>

# Email to Company CEO – Jan 29

## **Subject:** Summary of observations

         Your company overhead is 70-75%.  Not good.

         TAM’s 3 major issues:

o   You are paying for TAM and under-utilizing a lot of useful reports ie. Marketing, activity, call reports etc.

o   Duplicate/incorrect/missing data

o   Poor logging of management, producer and CSR activities

         Your major renewal cycle from March – September is approaching.  Plan?

         Developing your employee handbook  and operational policies are key initiatives.

o   Do it right, Do it once.

o   Older team members hate change.

         The Insurance Brokerage earns about 12.5% commission revenue on Personal lines and 7%-17% commission revenue on Commercial.  Higher comm. is earned on new business.

o   Limited performance/development incentives for CSRs and producers who are not named CEO, TopRep A or TopRepB 

o   There are opportunities for personal to commercial cross-sells at renewals

         Customers are observed to generally walk out happy.  So far.

         Company culture is A+; Employees are generally happy; they respect your management team and reception is good at taking care of walk-ins.

I welcome/encourage you to criticize, defend and agree next week.  Bring your current numbers, although Friday is not ideal for this discussion.

Can you print out your favourite reports and we can have a strategy/analytics discussion, just you and I?  Expiry, Production, Management Summary… print at least one of those.

# Email to Collaborative Competitor A – Jan. 26

## Subject: Insurance broker – summary of controller interview

Interviewed the company’s controller today to discuss their role, organization, problems and current analytics.  Here are my Coles notes to facilitate a better discussion tomorrow (and future proposal):

**Interview summary:**

* Brokerages’ primary business is in selling commercial and personal insurance products from various vendors.  They also have a registry.
* Major company goals are improving retention and cross-selling insurance products
  + Company basis retention performance on account renewals ->  The % of total accounts expected to renew every month
  + Company knows the major insurance products cross-sold though they do not report/monitor exact numbers
* Major software used for data mgmt, reporting and analysis
  + Applied Systems TAM (<https://www1.appliedsystems.com/en-us/applied-tam-2015/> )
    - Primary data collection, reporting and analysis tool for brokerage
    - Online, Cloud based system
    - Structured data, Excel exportable, Custom report creation with pivot table type fields
  + Excel
    - Mainly to visualize reports
* Controller performs accounting, HR, payroll, AR/AP reporting roles.  Manages internal company relations.  Accounting designation/background
  + “Co-controller” assists and manages external relations (ie. Key clients, insurance providers etc.)
  + 5 person top level management team
  + Current major projects:
    - Creating an employee handbook and company procedure manual (details unknown)
  + Generates/analyzes the majority of the reports for the company
* Two major sales/service roles -> Production (selling the insurance products) and CSR (routine customer support)
  + No clear development program in place from CSR to producer
    - *Controller mentioned some CSR/producers are not “motivated” or know “how” to retain customers ie. Preventing policy cancellations*
* Identified the top company sales people/producers
  + I calculated the top 3 producers account for ~30% total company revenue.
* Identified major renewal seasons for commercial and personal lines of insurance
* Discussed organizational structure
  + ~30 staff, fairly flat/matrix management.  Below mgmt., line structure with differing business lines.
* Retention problems
  + Commercial major business line.  O&G and trucking clients mainly.  Economy is the major problem.
  + Company customer service procedures
  + Rate increases causes clients to “jump ship”
  + Employee retention incentives include trips to Vegas, gift cards, days off -> company not sure if this is effective or what employees want
* Identified problem client behaviours (the ones they do not want to retain)
  + Accounts with frequent policy changes -> add administrative overhead.  Solution: Add Admin fee to account.

**Services required:**

1. Data cleanup/transformation.
   1. Observed duplicates, missing data, info not properly filled in etc.
   2. Need to investigate platform on how to perform mass changes and what is required to be changed
   3. Need to investigate if SQL database can be direct queried or there is an API to connect
2. Data exploration
   1. Perform ETL processes on TAM data using Python
   2. Data exploration using Tableau and Python
   3. Identification of data types (continuous, discrete, categorical etc.)
   4. Identification of data features related to retention and cross-selling goals
3. Data analytics
   1. Creation of basis analytics -> top 20%, histograms, pie charts, etc.
   2. Experimentation with machine learning and predictive models -> multi-variate regression, neural networks, etc.
4. Data visualization
   1. Excel or Tableau dashboards… TBD after exploration and further needs assessments
5. Management consulting
   1. Recommending reporting, decision-making and operating procedures/policies on retention and product cross-selling
   2. Identifying an appropriate reporting and analytics toolchain and workflow for the company

I advised client analytics are a small portion to meet their goals. Given the right numbers and visuals, they need an equally effective implementation strategy to meet goals.  Analytics do not equal goals met.

I see 3 phases to this project with separate estimates.  Collection/Exploration, Analytics, and Visualization/Management Consulting.   Collaborative Competitor A could be very useful in points 3,4,5 (or all!).  I think this should be enough information for us to understand the client needs and plan an approach.

Confidentiality is big for them and myself.  I have informed them I would do most of the work on site and would facilitate a procedure to export normalized, non-identifiable data if I had to take data off site to analyze or distribute.

I included a lot of confidential information here though it shouldn’t necessarily identify my client.  My mutual NDA (pretty standard language) is attached.  Could we sign it and have a more open discussion?  I also cannot guarantee this is a confirmed business transaction though there is promise to it and I have taken steps to properly qualify my client.