Measuring Financial Health of Non-Profit Organizations
## A Data Analysis Initiative with Corelytics

Opportunity

- The Corelytics financial dashboard crunches data from accounting systems to help companies keep track of the vital signs of their business
- Accounting ledger data so collected across multiple industries has potential for detailed analysis
- Our focus area: Non-Profit Industry

Non-Profit Industry Overview
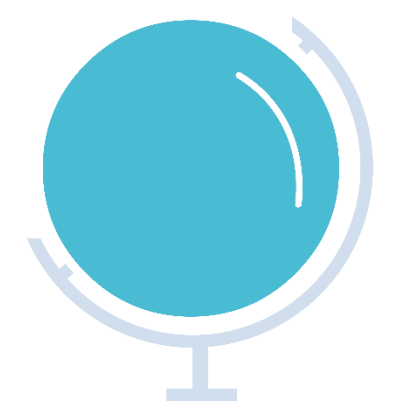
- Accounts for 9% ($1.5 trillion) of GDP
- Only 4% of non-profits have a revenue >10M
- Social problems are gigantic, NPOs addressing then are small
- Systemic issues in grasping the importance of profit in NPOs
- Very few social enterprises conduct themselves like for-profits: Example our very own - UW!

Source: http://altruistpartners.com/wp-content/uploads/2015/05/keynote.pdf
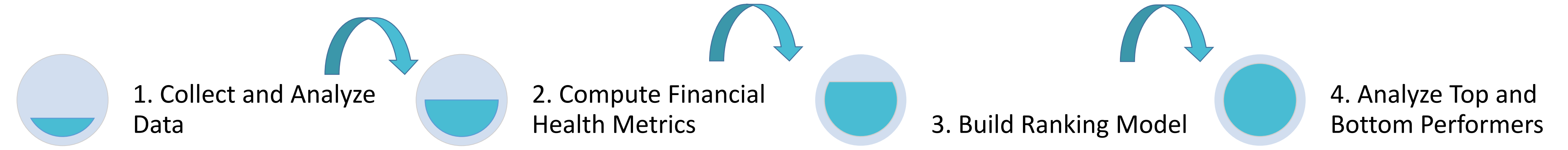
Objectives
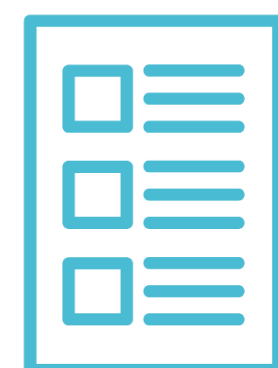
- Analyze multi-dimensional accounting data of non-profits to arrive at **financial health index**
- Identify **key indicators** of financial health
- Provide **recommendations** to Corelytics on how they can better cater to non-profit clients

Impact

- For **Corelytics** : Expansion of client base, Focused Financial Consulting
- For NPOs: Isolation of distinct problem areas in financial health, Improved Predictive Analytics using new dimensions
- For you and me: Better NPOs = Better tomorrow!

Data Analysis

1. Collect and Analyze Data
2. Compute Financial Health Metrics
3. Build Ranking Model
4. Analyze Top and Bottom Performers

1. Collect and Analyze Data

Corelytics provided access to accounting data though SQL Server database.
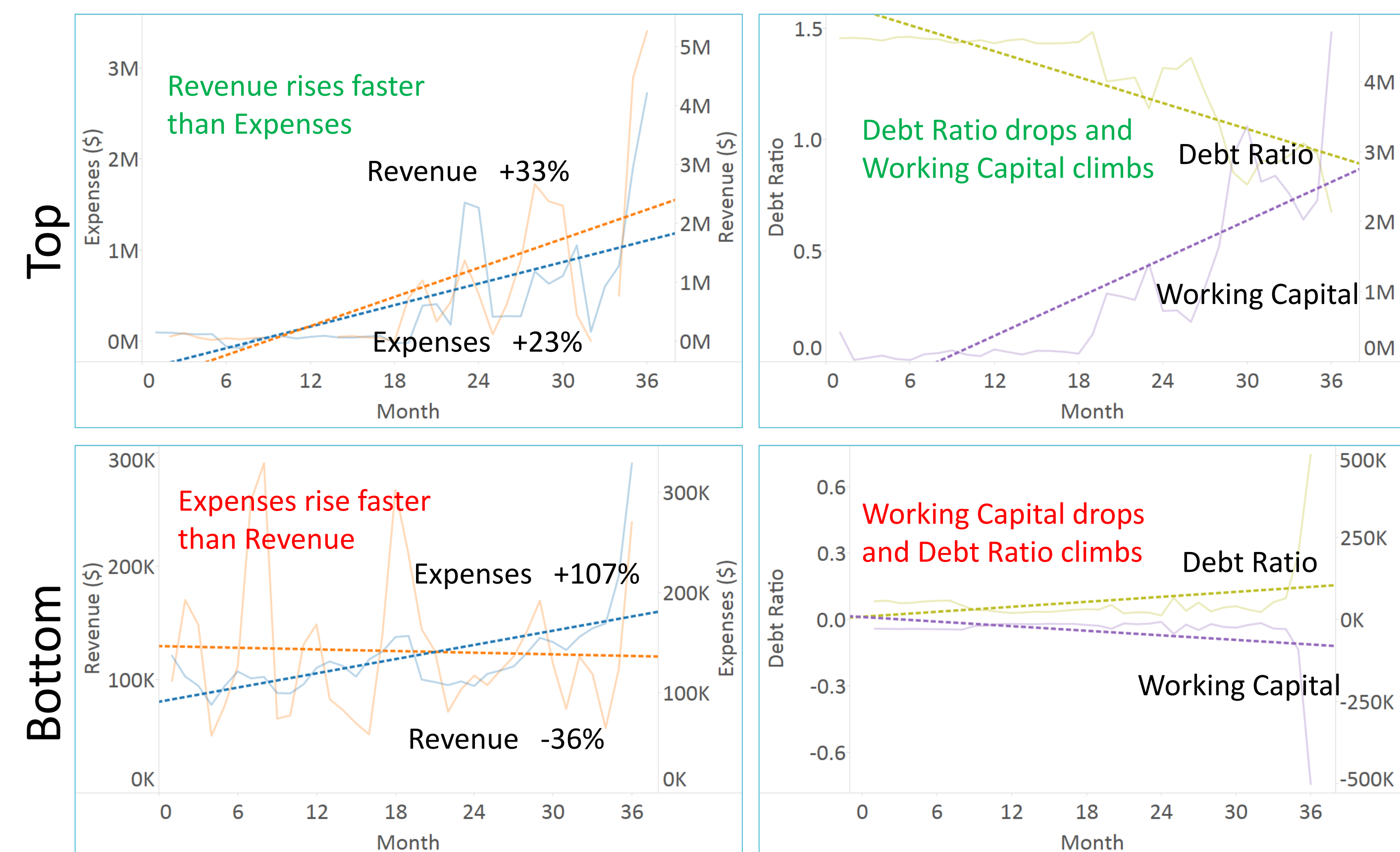Multidimensional data was queried, transformed and analyzed using SQL Server, MS Excel and Tableau.

2. Compute Financial Health Metrics

- Quick Ratio
- Working Capital
- Cash/Sales Ratio
- Revenue
- Net Profit
- Net Profit %
- Growth Rate
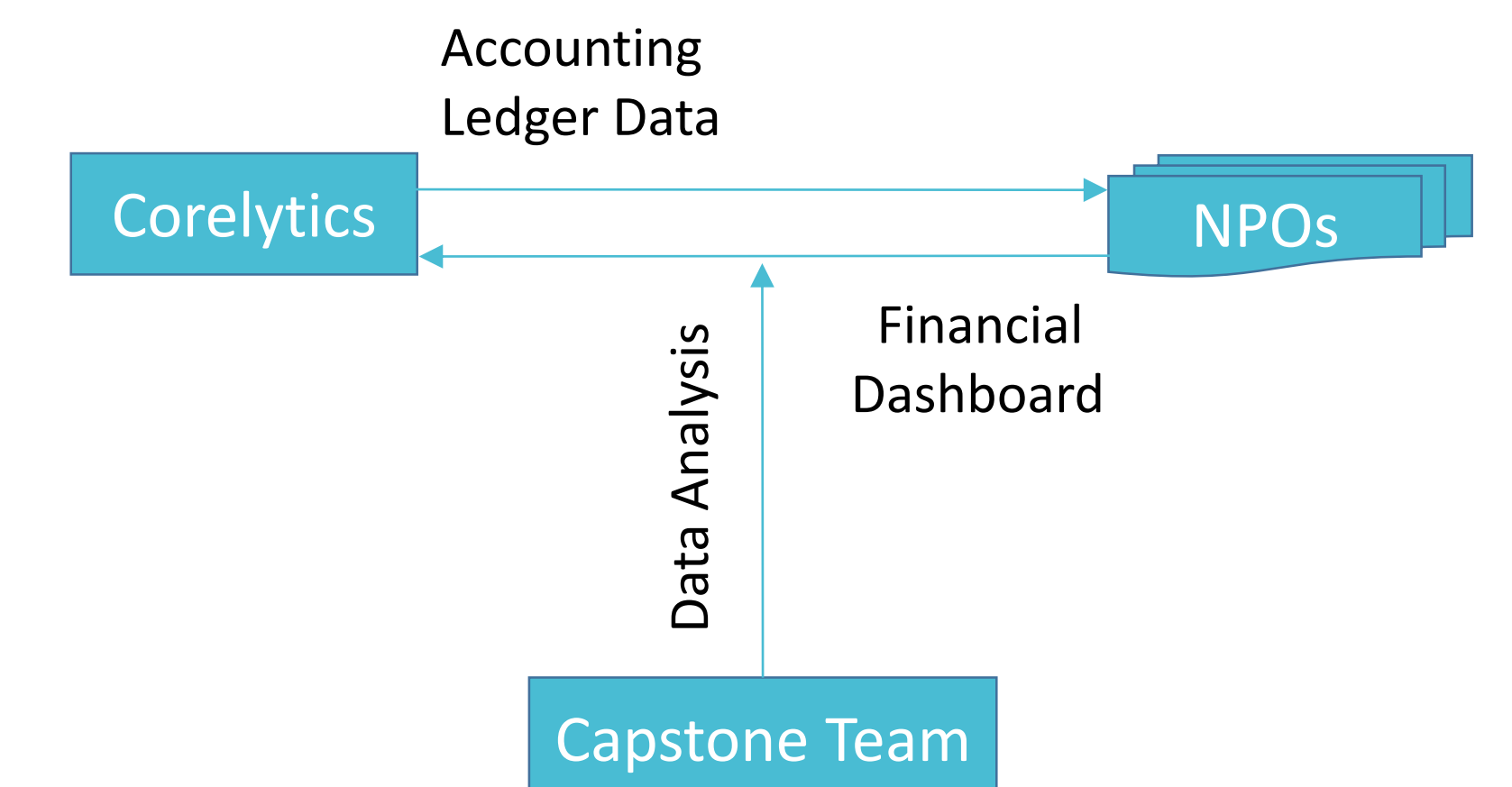- Debt Ratio
- Leverage Ratio
- AR Days

3. Build Ranking Model

Key metrics were identified and a Financial Health Index was formulated. Computation of the Financial Health Index involves detailed longitudinal, cross-sectional and trend analysis over the normalized metrics for all companies in the NPO industry.

4. Analyze Top and Bottom Performers

Top — Revenue rises faster than Expenses — Revenue +33% — Expenses +23%

Top — Debt Ratio drops and Working Capital climbs — Debt Ratio — Working Capital

Bottom — Expenses rise faster than Revenue — Expenses +107% — Revenue -36%

Bottom — Working Capital drops and Debt Ratio climbs — Debt Ratio — Working Capital

Growth percentages derived from trend line growth rates based on the latest 12 months growth divided by the prior 12 month total.

Information Flow

Accounting Ledger Data — Corelytics — NPOs — Financial Dashboard — Data Analysis — Capstone Team
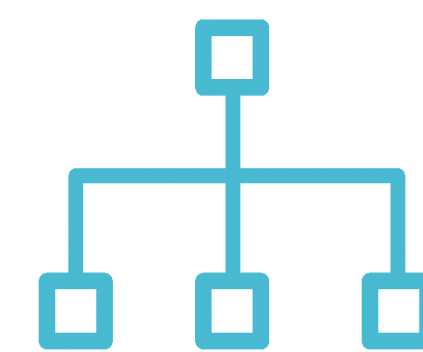
" We need smarter non-profits that manage finances like for-profits. In fact non-profits have a moral imperative to grow, simply because they work for social good. "
– Donald Summers, Director, Altruist Partners

Findings & Recommendations

**Provision to classify sources of revenue does not exist.**

Introducing a feature to classify sources of revenue will specifically help NPOs since diversification of revenue sources helps mitigate the risk of a major source falling out.

Categorical allocation of expenses between direct and indirect program costs is not enforced.

NPOs need to track their administrative, fundraising and program expenses individually in order to formulate their management strategies effectively.

Only 18% of NPO clients segregate accounting data by Line of Business.

18%
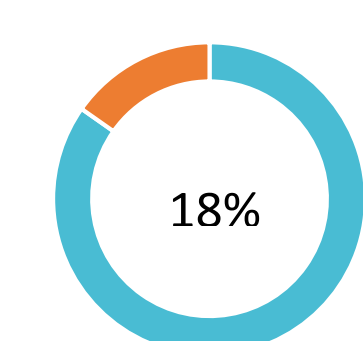
Corelytics can encourage clients to use already available LOB feature.
Tracking metrics at LOB level helps zoom in on the real problem area.

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Corelytics