

Prodoscore and ROI Possibilities



Research conducted and validated by
third-party Data Science team, in
partnership with the Prodoscore
Research Council

Published September 17, 2020

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 Prodoscore™
Productivity Intelligence

The Current Landscape

Based on trends in economic data, organizations face an ever-increasing **demand for efficiency**. The COVID-19 pandemic has placed severe strain on large numbers of businesses, resulting in a spike in unemployment. With recent U.S. monetary policy keeping interest rates low, the potential for inflation and its associated consequences for businesses are increasingly likely.

The external environment has in many ways, become a pressure cooker for businesses. Growing long-term pressures and more dramatic short-term changes have resulted in a **need to optimize their return on investments**. Indeed, organizations that are positioned for success are actively identifying and implementing innovative methods for reducing up-front costs while simultaneously discovering new ways to improve upon returns.

One of the ways in which organizations have sought to achieve more efficient functioning is to utilize **advancements in big data to gain insights** regarding what is the most parsimonious set, or series of behavior, needed to secure an organization's future. The combination of big data, computing power, and predictive statistical modeling have allowed organizations to gain new insights into their workforce. In fact, according to the Society of Human Resource Management, a majority (i.e., 53%) of HR departments with over 500 employees have indicated that they are now using big data for internal decision-making processes.

Although adoption of these data-driven approaches is increasing, there are still some obstacles. Specifically, the top reason why organizations are not currently using big data is because they lack the **expertise needed to compile, analyze, and interpret data**.

Measuring Productivity with Prodoscore

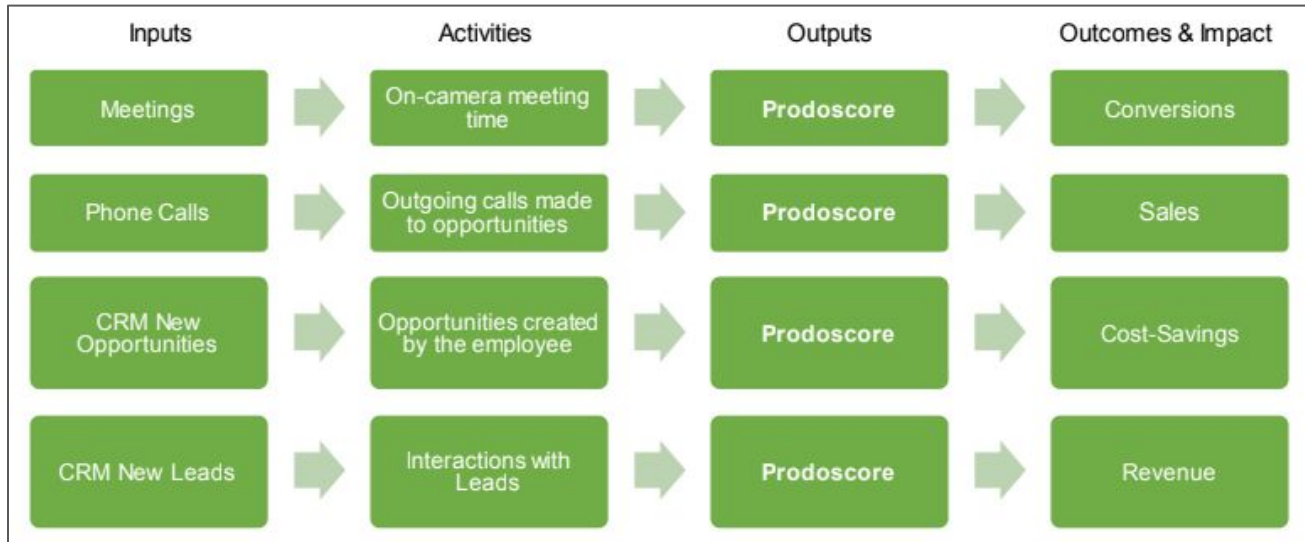
Productivity is a measure of economic performance that indicates how efficiently inputs are converted into outputs


$$\frac{\text{Return (Benefit)}}{\text{Investment (Cost)}} = \text{ROI}$$

- Using cloud-based technology + big data, Prodoscore allows orgs to quantify worker efficiency by passively collecting data each time an a productive action is performed
- Productive actions lead to efficiency and can be applied to job evaluations to help managers determine relative value and worth of a position and its cost effectiveness
- Managers can quantify efficiency gains over the lifetime of an employee (i.e. Measure the time it takes for a sales exec to ramp up and complete their first sale to compare average ramp times)
- ROI is calculated using benchmarks of employee salaries and benefits, and tech and admin costs

Measuring Productivity with Prodoscore

Prodoscore captures the behaviors that lead to productivity. The retroactive measurement opens the door for a pre and post behavioral cost analysis, and the opportunity to build testable logic models to capture the dynamics underlying worker productivity.



Sample Logic Model Using Prodoscore

An Approach to Measuring ROI

1. Identify the department where you want to see a return (OUTCOME)
2. Identify the target (department identified above), comparison group (other department), and control variables
3. Identify the timeframe needed to measure the return on productivity activities
4. Identify the monetary value of changes in Prodoscore

5. Measure a business' outcomes and/or established benchmarks to determine the predictive power a change in score has on estimating change in measurable business outcomes (prediction metric is the coefficient of determination: R²).

EXAMPLE: If a company determines Prodoscore has an R² of 52% when forecasting revenue in a quarter and if a linear model is used, every unit increase in Prodoscore will be associated with 52% of the change in quarterly revenue.

Sample linear equation for determining R² of Prodoscore: Revenue = β *(Prodoscore) + e

β is the relationship between a unit increase in Prodoscore and revenue, e is the remaining 48% of change that's not accounted for by Prodoscore. Prodoscore paired with additional indicators of performance will help uncover the unique contribution productivity has in predicting business outcomes.

6. Use Prodoscore to capture the change in productivity among employees using individual units of analysis that provide insight into specific inputs that go into a score
7. Calculate the annual change in productivity and its estimated impact on business outcomes

Important Metrics:

Employee ROI = (Revenue - Operating Expenses - Employee Comp)

Employee Comp

Employee Benefits-Cost-Ratio = (Revenue + Additional Employee Benefits)

Employee Comp

Calculating Employee ROI Using Prodoscore

COSTS	CURRENT STATE	POST PRODOSCORE IMPLEMENTATION
Annual revenue per employee	\$323,823	\$373,988
Operating expenses per employee	\$5,476	\$4,771
Annual cost of absenteeism	\$50,000	\$40,000
Turnover rate	20.2%	15.7%
Average cost per hire	\$4,129	\$3,847
Average employee replacement cost	\$45,000	\$30,000
Annual cost of unproductive hours	Unknown/unmanaged	\$410,335

Disclaimer: Although great consideration and care has gone into ensuring the accuracy of the examples shown, the Behavioral Science Team and Prodoscore are not able to accept any legal responsibility for any actions taken based on the information contained herein. The tool is an example of how to estimate the ROI within your business after implementing Prodoscore.

Calculating Employee ROI Using Prodoscore

ROI POST PRODOSCORE IMPLEMENTATION	DELTA	CALCULATED CHANGE
Additional revenue streams	Total revenue - revenue per employee	\$10,976,220
Revenue gained per employee	Change in employee revenue	\$50,165
Annual savings from turnover	Change in average cost per hire (200 employees)	\$56,400
Annual savings from absenteeism	Change in absenteeism costs	\$10,000
Annual savings unproductive hours	Initial productivity cost - post Prodoscore cost	\$204,675
Estimated Total ROI (annual)		\$11,297,460
Estimated Prodoscore Return (annual)		\$321,240

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