Predictive Analytics is the use of data, statistical algorithms, and machine learning techniques to identify the likelihood of future outcomes based on historical data. The goal is to go beyond knowing what has happened to providing a best assessment of what will happen in the future.

1901 Group uses Predictive Analytics to take corrective actions in advance of service disruptions, allowing customers to become proactive and forward looking by anticipating outcomes and behaviors based upon data, not hunches or assumptions.

The following is a use case illustration of how 1901 Group uses Predictive Analytics to benefit customers:

Before they were a 1901 Group customer, "Organization X" experienced up to 6 hours of avoidable downtime due to device failure using their previous methods of reactive network management.

**Before**

- **Hour 0**: Device failure triggers simple analytics alert.
- **Hour 1**: Tier 1 Analyst checks to see if device resets.
- **Hour 2**: Device down, Tier 1 Analyst follows SOP to reset.
- **Hour 3**: Device still down, Tier 2/3 works to resolve or reset.
- **Hour 5**: Device still down, Tier 2/3 determines need for replacement.
- **Hour 6**: Replacement ticket initiated.

**After**

- **Hour 0**: Device behavior triggers complex "predictive" analytics alert, Replacement ticket initiated.
- **Hour 6**: Device Replaced.

What does 6 HOURS of network downtime mean to your business?

**$859,782**

*Based on public reports from leading IT analysts, the average length of a network outage is 4.7 hours, and the average cost per outage, excluding lost revenue estimates, is $673,495. Which equates to $143,297/hr.

1901 Group automates decision support using Predictive Analytics comprised of combinations of simple and complex behavioral analytics and alerts.

**Factor 1: Simple Analytics**
- Device CPU memory exceeds threshold triggering alert.

**Factor 2: Simple Analytics**
- Same device records 3 or more alerts within a 30 day period.

**Factor 3: Complex Analytics**
- None of the 3 or more alerts are common causes.

**Predictive Analytics**
- Prior to outage, proactive alert triggers device replacement.

1901 Group utilizes Predictive Analytics to deliver the following results to our customers:

- **Improved System Reliability**
- **Increased Service Quality**
- **Reduced Operational Costs**