



# **PathPoint Value Assessment**

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## **An Analysis of PathPoint Impact on Time, Cost and Personal Productivity**

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## Executive Summary

PathPoint offers mainframe application personnel with the keys to success for current and future mainframe application projects, by helping them:

- Understand HOW the applications really work
- Know WHERE in the applications to make changes or investigations

### ***Preparing for the Future***

PathPoint will simplify, accelerate and even fund, the transformation of legacy mainframe applications to more flexible, functional and nimble applications. PathPoint directly applies to projects that prepare mainframe applications for the future, including:

- Service Oriented Architecture (SOA)
- Modernization / Transformation
- Componentization

### ***Managing the Present***

PathPoint provides high-impact value to the mainframe application team by providing a means to reduce the time and effort associated with managing the day to day mainframe application maintenance project workload, including:

- Change Requests
- Problem Determination
- Performance Assessment

### ***Managing Outsourcers***

PathPoint will enable IT organizations to more effectively manage outsourcers who provide mainframe application services. The PathPoint benefits include:

- Provides a rapid factual basis for estimating the scope of a project
- Enables a common fact-based way to communicate
- Accelerates turn-around time for all projects
- Facilitates a consistent, best-practices, repeatable approach to projects

### ***Funding the Present and the Future***

Personal productivity improvements will result from the use of PathPoint and, in turn, save time and money. The time saved has significant value and will provide a unique vehicle to fund present and future projects, as described below:

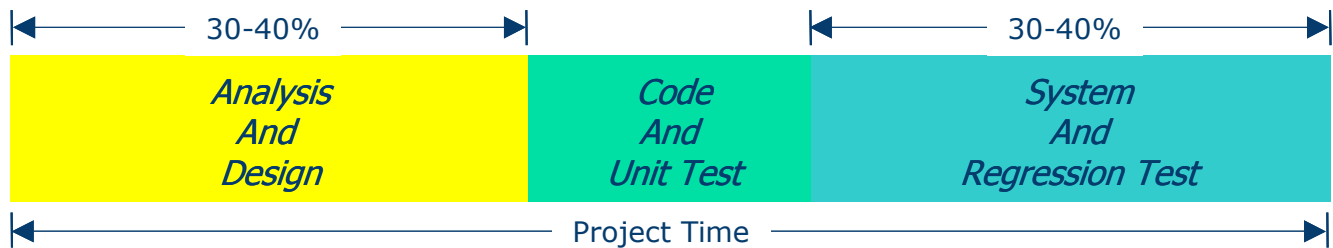
- *Present Projects.* PathPoint has the potential to reduce the annual mainframe application maintenance budget by as much as 20% - as a result of personal productivity.
- *Future Projects.* PathPoint will enable solution delivery timeframes to be reduced by up to 20% for projects related to the future, such as: SOA, Modernization/Transformation and Componentization.

## PathPoint Value Proposition Overview

### A Breakthrough Productivity Tool for Mainframe Application Maintenance and Development Projects

#### *The Traditional Approach*

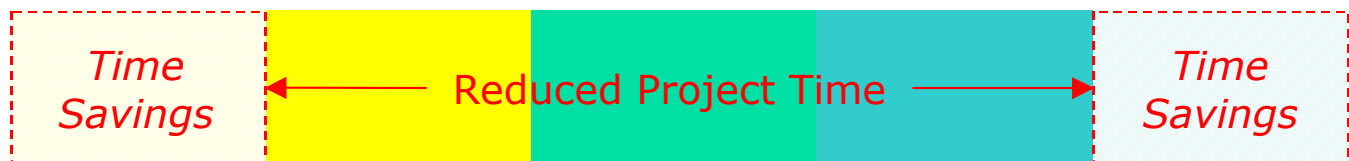
The traditional approach to mainframe application projects involves many hours spent analyzing source code in an attempt to understand where changes can be made to the code with minimal disruption and risk. A great deal of time is spent on the front end of the project for analysis and the back end of the project for testing, as illustrated in the picture below:



#### *The PathPoint Approach*

The PathPoint breakthrough productivity tool, for the mainframe application development team, enables analysts, designers, programmers and testers to quickly understand how mainframe applications “really” work and easily know where in the source code to make changes - without any changes to application source code.

Front-end analysis time and back-end testing time are reduced dramatically and, as a result, overall project time is reduced. All, as a result of using PathPoints unique Execution-Based Approach to application analysis.



## Purpose of This Document

This document is designed to provide customer with a means to assess the value of PathPoint in the context of the impact on time, cost, and personnel productivity.

## Basic Assumptions

Below is a matrix of assumptions that were used in this document to calculate costs, savings and estimate personal productivity gains.

Basic Assumptions	Numbers
Total Personnel	285
Average Burdened Cost per Person	\$100,000
Total Annual Burdened Cost for All	\$28,500,000
Work Hour Burdened Cost	\$50
Annual Workdays (50 weeks)	250
Daily Work Hours	8
Annual Work Hours per Person	2000
- Work Hours for Analysis (40%)	800
- Work Hours for Test (40%)	800
- Work Hours for Coding (20%)	400
Total Annual Projects	500

## PathPoint Value Assessment - Personnel Impact

Solid gains in personnel productivity should deliver three cost saving opportunities as a result of implementing PathPoint in customer's mainframe development and test environment. Productivity gains and cost saving opportunities include:

- Completing more work in the same period of time
- Re-allocation of personnel resources
- Reduce the requirement to hire new personnel

### Personnel Productivity – More Work in the Same Time Period

The current 285 person staff can deliver the work of 285 people, or 100% per person productivity. PathPoints core value provides the potential to improve the productivity of each person by 10% to 20%. Thus, 228 people can do the work of 285 at a 20% productivity improvement rate and 257 people the work of 285 at a 10% improvement rate. Between 29 and 57 people become available for other projects, representing a potential annual dollar savings of \$2,850,000 to \$5,700,000.

Current Personnel Productivity	Current People	Productivity	Per-Person Productivity	Burdened Cost		
	285	285	100%	\$28,500,000		

PathPoint Improves Personnel Productivity	Revised People	Productivity	Revised Per-Person Productivity	Revised Burdened Cost	People Savings	Dollar Savings
<b>Productivity Improvement = 20%</b>	228	285	120%	\$22,800,000	57	\$5,700,000
<b>Productivity Improvement = 10%</b>	257	285	110%	\$25,650,000	29	\$2,850,000

### Personnel Re-Allocation Opportunity

Typical mainframe application IT organizations allocate the bulk of resources (80%) to mainframe application maintenance, and a lesser amount (20%) to new mainframe application development. PathPoints core value (personal productivity) provides customer with an opportunity to re-allocate between 23 (10%) and 46 (20%) personnel from the application maintenance area into other areas, such as new development. Potential annual savings realized is up to \$4,560,000.

Current Personnel Allocation	Application Maintenance	New Development	Ratio	Burdened Cost		
	228	57	4 to 1	\$28,500,000		

PathPoint Enables Re-Allocation of Personnel	Revised Application Maintenance	New Development	Revised Ratio	Revised Burdened Cost	People Savings	Dollar Savings
<b>Re-Allocation Opportunity = 20%</b>	182	57	3.2 to 1	\$23,940,000	46	\$4,560,000
<b>Re-Allocation Opportunity = 10%</b>	205	57	3.6 to 1	\$26,220,000	23	\$2,300,000

***New Mainframe Application Personnel - Reduce the Number of New Hires***

Hiring and training new mainframe application personnel is time consuming and costly. PathPoints impact in this area is twofold. First, for new hires, PathPoint provides customer with a way to accelerate new hire knowledge of existing mainframe applications, causing them to quickly become productive members of the team. Second, the need to hire new mainframe application personnel is diminished due to the improved productivity of the existing mainframe application staff. Deferred hiring decisions (of 10 people) could save \$1,000,000 annually.

Current New Hire Requirements
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Planned Hires	Productivity	Burdened Cost	Total Cost
15	Unknown	\$100,000	\$1,500,000

<b>PathPoint Reduces the Need to Hire More Personnel</b>
<b><i>Reduction in New Hires = 10</i></b>

<i>Revised Actual Hires</i>	<i>Productivity</i>	<i>Burdened Cost</i>	<i>Revised Cost</i>	<b><i>People Savings</i></b>	<b><i>Dollar Savings</i></b>
5	High	\$100,000	\$500,000	<b>10</b>	<b>\$1,000,000</b>

## PathPoint Value Assessment – Personal Productivity

The core PathPoint value proposition revolves around streamlining the approach to mainframe application projects – with a new breakthrough execution-based approach. This approach manifests itself, and provides substantial benefits, in three different ways:

- Reduced project analysis time
- Reduced project testing time
- Completing more projects in less time

### Reduced Project Analysis Time

PathPoint estimates that the current staff (285 people) devotes 40% of their available annual hours (228,000 hours) to mainframe application analysis in support of mainframe application projects. The PathPoint approach will lead to a significant reduction in the amount of time devoted to application analysis. PathPoint estimates that annual project analysis timesavings will be 114,000 hours (a 50% reduction) representing a \$5,700,000 annual savings. A conservative estimate of time savings (25% reduction) for project analysis time would result in a 57,000 hour annual savings valued at \$2,850,000.

Current Project Analysis Time
-------------------------------

People	Available Hours	Analysis Hours	Analysis Cost
285	570,000	228,000	\$11,400,000

PathPoint Reduces Project Analysis Time
<b>Analysis Time Reduction = 50%</b>
<b>Analysis Time Reduction = 25%</b>

People	Available Hours	Revised Analysis Hours	Revised Analysis Cost	Hour Savings	Dollar Savings
285	570,000	114,000	\$5,700,000	114,000	\$5,700,000
285	570,000	171,000	\$8,550,000	57,000	\$2,850,000

### Reduced Project Testing Time

PathPoint estimates that the current staff (285 people) devotes 40% of their available annual hours (228,000 hours) to mainframe application testing in support of mainframe application projects. The PathPoint approach should lead to a substantial reduction (up to 40%) in the amount of time devoted to testing, due to the accuracy of front-end analysis, which represents a potential annual savings of 91,200 hours of time valued at \$4,560,000. A 20% reduction in testing time will save 45,600 hours annually valued at \$2,280,000.

Current Project Testing Time
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People	Available Hours	Test Hours	Testing Cost
285	570,000	228,000	\$11,400,000

PathPoint Reduces Project Testing Time
<b>Testing Time Reduction = 40%</b>
<b>Testing Time Reduction = 20%</b>

People	Available Hours	Revised Test Hours	Revised Testing Cost	Hour Savings	Dollar Savings
285	570,000	136,800	\$6,840,000	91,200	\$4,560,000
285	570,000	182,400	\$9,120,000	45,600	\$2,280,000

**Completing More Projects**

A current annual workload of 500 projects, with an average cost of \$57,000 per project, is assumed in this analysis. The productivity gains (20%) resulting from the use of PathPoint will result in the existing team (285) completing more projects (600) in the same period of time, for a \$9,500 reduction in the average cost of each project. Alternatively, if 10% productivity gains are realized then 550 projects can be completed annually which reduces the average cost per project by \$5,182.

Current Project Workload	People	Projects	Burdened Cost	Cost Per Project
	285	500	\$28,500,000	\$57,000

PathPoint Enables Personnel to Complete More Projects	People	<i>Revised Projects</i>	Burdened Cost	<i>Revised Cost Per Project</i>	<i>Revised Projects</i>	<i>Dollar Savings</i>
	285	600	\$28,500,000	\$47,500	600	\$9,500
	285	550	\$28,500,000	\$51,818	550	\$5,182
<i>Projects Increased By 20%</i>						
<i>Projects Increased By 10%</i>						

## PathPoint Value Illustration – Two Sample Projects

Man-months of burdened cost, allocated by project phase, are a typical way to estimate the cost of a planned project or assess the actual costs after the project is complete.

The two sample projects below, illustrate the benefit of using PathPoint. Man-month reductions in analysis and testing time result in significant savings for both sample projects.

- 12 month project savings = \$ 597,893
- 36 month project savings = \$1,866,592

12 Month Project 205 Man-Months	Allocations			PathPoint Potential Savings		
	<i>Project Components</i>	<i>% Project</i>	<i>M-Months</i>	<i>Dollars*</i>	<i>Time</i>	<i>M-Months</i>
Analysis Time	35%	72	\$597,893	50%	36	\$298,946
Coding Time	30%	62	\$512,480			
Testing Time	35%	72	\$597,893	50%	36	\$298,946
<b>Total</b>	<b>100%</b>	<b>205</b>	<b>\$1,708,265</b>		<b>72</b>	<b>\$597,893</b>

36 Month Project 700 Man-Months	Allocations			PathPoint Potential Savings		
	<i>Project Components</i>	<i>% Project</i>	<i>M-Months</i>	<i>Dollars*</i>	<i>Time</i>	<i>M-Months</i>
Analysis Time	32%	224	\$1,866,592	50%	112	\$933,296
Coding Time	36%	252	\$2,099,916			
Testing Time	32%	224	\$1,866,592	50%	112	\$933,296
<b>Total</b>	<b>100%</b>	<b>700</b>	<b>\$5,833,100</b>		<b>224</b>	<b>\$1,866,592</b>

<b>*Man-Month Cost</b>	<b>=</b>	<b>\$8,333</b>
<b>Annual Burdened Cost</b>	<b>=</b>	<b>\$100,000</b>
<b>Burdened Cost / 12 Month</b>	<b>=</b>	<b>Man-Month Cost</b>

## PathPoint Return on Investment Summary

A \$681,400 investment is assumed in this example.

A PathPoint solution will deliver sustainable near-term and long-term savings. PathPoint high impact areas and corresponding savings over three years, deliver a swift and positive return on investment, as illustrated below:

<b>Investment</b>
\$1,000,000

PathPoint High Impact Areas	Impact	Savings				Return on Investment	
		Year 1	Year 2	Year 3	Total	In Months	3 Year ROI
Personnel Productivity	Improvement = 20%	\$5,700,000	\$5,700,000	\$5,700,000	\$17,100,000	2.11	17.10
	Improvement = 10%	\$2,850,000	\$2,850,000	\$2,850,000	\$8,550,000	4.21	8.55
Personnel Re-Allocation	Opportunity = 20%	\$4,560,000	\$4,560,000	\$4,560,000	\$13,680,000	2.63	13.68
	Opportunity = 10%	\$2,300,000	\$2,300,000	\$2,300,000	\$6,900,000	5.22	6.90
Reduce the Number of New Hires	Reduction = 10	\$1,000,000	\$1,000,000	\$1,000,000	\$3,000,000	12.00	3.00
	Reduction = 5	\$500,000	\$500,000	\$500,000	\$1,500,000	24.00	1.50
Project Analysis Time	Reduction = 50%	\$5,700,000	\$5,700,000	\$5,700,000	\$17,100,000	2.11	17.10
	Reduction = 10%	\$2,850,000	\$2,850,000	\$2,850,000	\$8,550,000	4.21	8.55
Project Testing Time	Reduction = 40%	\$4,560,000	\$4,560,000	\$4,560,000	\$13,680,000	2.63	13.68
	Reduction = 20%	\$2,280,000	\$2,280,000	\$2,280,000	\$6,840,000	5.26	6.84

## Summary of Benefits

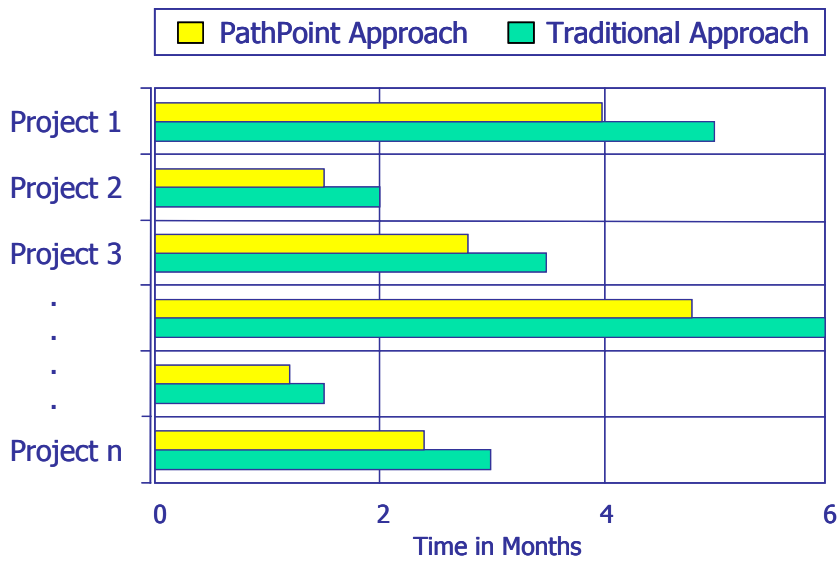
PathPoint will have a far-reaching impact on customer mainframe application development staff and their approach to mainframe application projects in the future - transcending personnel, time and cost value.

PathPoint will enable customer to leverage existing mainframe applications to a greater extent than before as a result of a new breakthrough execution-based approach to application analysis.

Benefits	Description
<p><b>Best Practices Methodology</b></p>	<p>PathPoint provides a standardized, best practices, approach to mainframe application projects. From analysis through testing, team members will approach projects in a consistent repeatable fashion - increasing efficiency and accuracy while reducing project time and cost.</p>
<p><b>Rapid Application Assessment</b></p>	<p>The PathPoint approach provides a vehicle for rapid, factual application assessment providing a basis for understanding application complexity – important for project estimating and project delivery. Further, captured information provides a fact-based common way to communicate with team members here or offshore.</p>
<p><b>Risk Mitigation During Project Scoping</b></p>	<p>PathPoint provides a rapid and factual basis for estimating the scope of the project – without accessing source code. This fact-based approach leads to more accurate assessments and increases the opportunity to complete a project on-time and under budget – mitigating the risks associated with complex mainframe projects.</p>
<p><b>Substantial Productivity Gains During Project Start-up</b></p>	<p>The PathPoint PC relational warehouse enables project team members to quickly understand the way that the application actually works, accelerating their learning curve. Team member productivity gains result from the in-depth information and common way to view and discuss the application.</p>
<p><b>Ongoing Productivity Gains</b></p>	<p>Project team members are able to quickly assess applications - without looking at source code. Turnaround time for change requests is accelerated, root-cause analysis for problems simplified and quick-hit opportunities more easily identified.</p>
<p><b>Improved Communications</b></p>	<p>Captured application information provides project team members with a straight-forward fact-based and common way to communicate with one another or with third party services providers.</p>

## Additional Illustrations – The PathPoint Value Proposition

### More Projects in the Same Time Frame



### Personnel Productivity Reduces Workload and Drives Down Cost

