

# IT Key Metrics Data 2023: Infrastructure Measures — Mainframe Analysis

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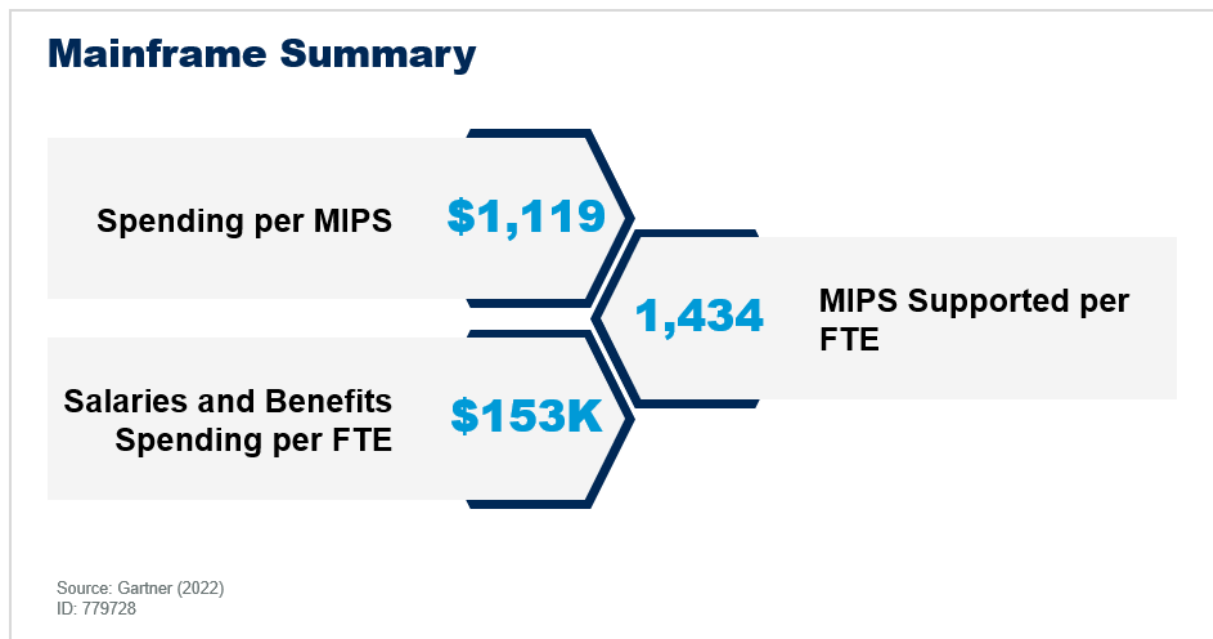
Initiatives: [Technology Finance, Risk and Value Management](#); [I&O Operations Management](#); [I&O Organizational Strategy](#)

The modernization of the digital workplace will bring along new spending requirements, and IT cost optimization will become increasingly important. IT leaders must quantify and communicate the benefits of collaboration, innovation and transformation being promised, as well as the steps they take to keep unnecessary spending in check. This research contains high-level Mainframe spending efficiency and staff productivity benchmarks which should be used as part of a perennial cost and value optimization program. The published information includes data collected throughout 2022 from a global audience of CIOs and IT leaders.

## Overview

The aim of this report is to help IT organizations assess their Mainframe spending and staff efficiency at high level through the use of unit cost, productivity and technical landscape metrics. These KPIs can be found in the summary figure below as well as throughout the report in more detail and context.

Figure 1: Mainframe Summary



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## Key Findings

- Based on the historic efficiency gaps observed between small and large Mainframe environments, it becomes clear that size is a key driver both from a unit cost and productivity perspective.
- Much of the increase in cost efficiency is likely due to lower hardware costs as shown in the asset distribution.
- Personnel Spending per Mainframe FTE continues to rise. The fact that the skills required to run and maintain the environment become increasingly hard to find in conjunction with a tight job market have contributed to this.

## Recommendations

- Evaluate your organization by leveraging the available published content or receive a report tailored to your organization by completing the [IT Key Metrics Comparison Tool: Data Center & Network](#).
- Refer to the available supporting documentation such as the [Data Center Framework Definitions](#) to better understand the consensus model and the methodology behind the metrics.
- Follow the [Practitioners Guide](#) to best prepare your data for comparison.
- Schedule an [inquiry](#) with a Gartner Expert to address alignment questions or to review your results and gain valuable insight based on your submission.

## Analysis

Clients improve business performance by benchmarking their spending, staff and best practices against Gartner's IT performance repository, the largest in the industry, drawing on over 5,000 IT benchmarks a year.

The produced metrics aim to help CIOs and IT Leaders evaluate the full life cycle management of all relevant Mainframe assets, both tangible and otherwise. By doing so, they will be better prepared to answer broader strategic questions such as whether it makes business sense to move workload to the cloud.

This report follows a top-down approach to the way the metrics are presented by starting with unit cost as the main spending efficiency indicator. We then strive to understand what is the effect of each asset to the unit cost by examining separately Personnel, Hardware, Software and External Services. The benefit of this method is that it reveals which elements of spending draw the most funds and identifies the key cost drivers for more actionable recommendations.

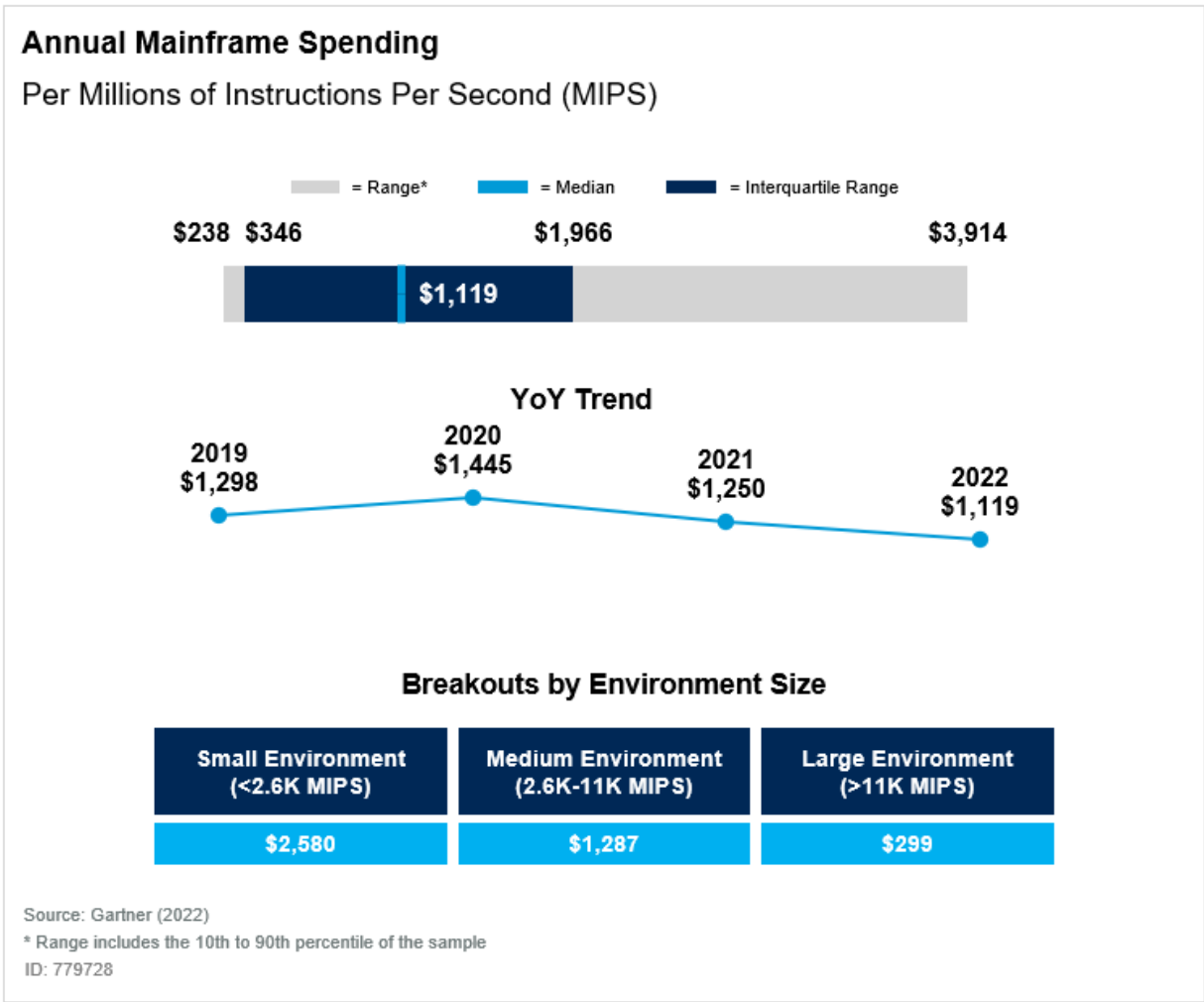
The metrics explored are database medians and do not account for individual variations of service quality, complexity or demand which may be justified by specific business needs.

## Annual Mainframe Spending per Installed MIPS

This metric is often used to evaluate the relative spending efficiency level of the overall Mainframe environment. While many software license costs are tied to the number of installed MIPS, this unit measure alone does not accurately represent cost related to the actual utilization of resources, nor does it provide any insight into the level of IT complexity supported.

Dynamics such as the online versus batch workload supported, installed general purpose MIPS versus specialty MIPS, the number of logical partitions, the service levels maintained all need to be considered as they are the primary drivers & fundamental context for a cost efficiency analysis.

Figure 2: Annual Mainframe Spending per Installed MIPS (USD)

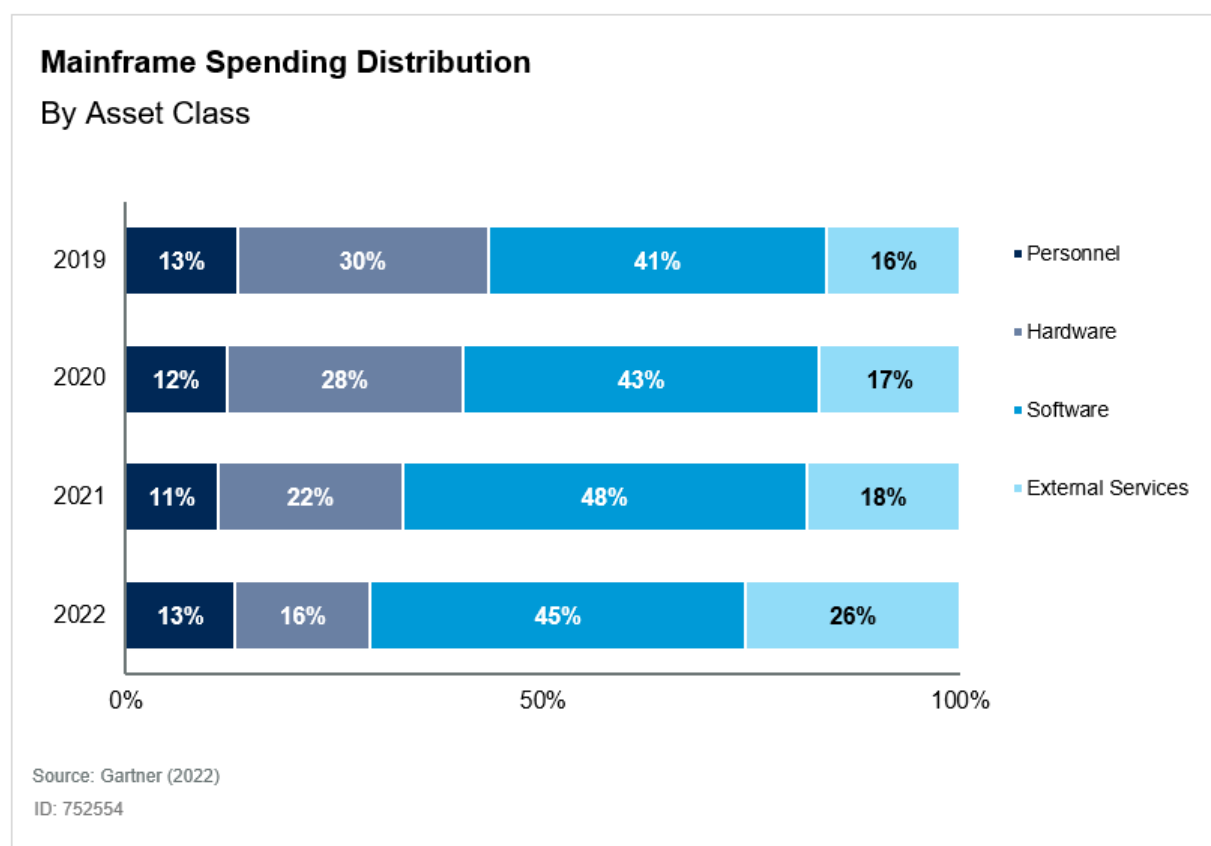


Mainframe Spending Distribution

This metric provides an understanding of how Mainframe spending is dispersed across the four Gartner consensus model asset classes. This distribution helps to outline personnel versus non-personnel related cost allocations. The degree in which an organization outsources can play a significant role in altering this distribution as personnel spending is typically the primary expense.

It is not uncommon to reduce spending in one asset only to have the follow-on effect of passing those costs off to another asset. By monitoring investments across all assets, such cost transfers within IT can be more visible.

**Figure 3: Mainframe Spending Distribution**



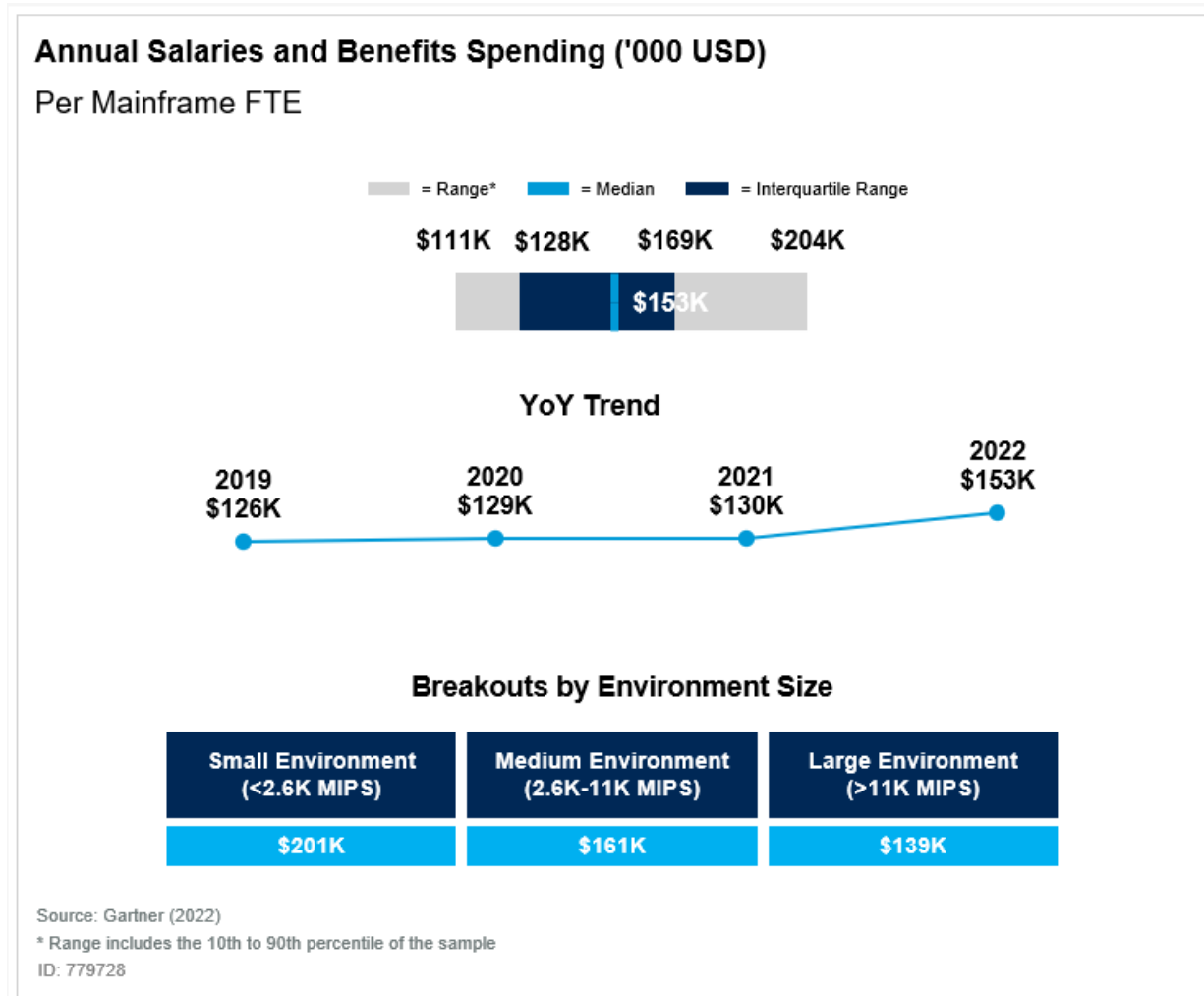
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## Annual Salaries and Benefits Spending per Mainframe FTE

Compensation metric that provides the median annual spending on salaries and benefits for a Mainframe FTE. This cost will vary depending on geographic location, experience, and expertise. This measure is best used within the context of the skill requirements for the various roles within the technology environment depending on the environment structure and level of complexity.

Questions to consider can be along the lines of: *What percentage of the environment FTEs are management versus engineering? What services/roles are outsourced to a third party? How does the use of contractors and/or offshore labor impact your costs?*

**Figure 4: Annual Salaries and Benefits Spending per Mainframe FTE ('000 USD)**

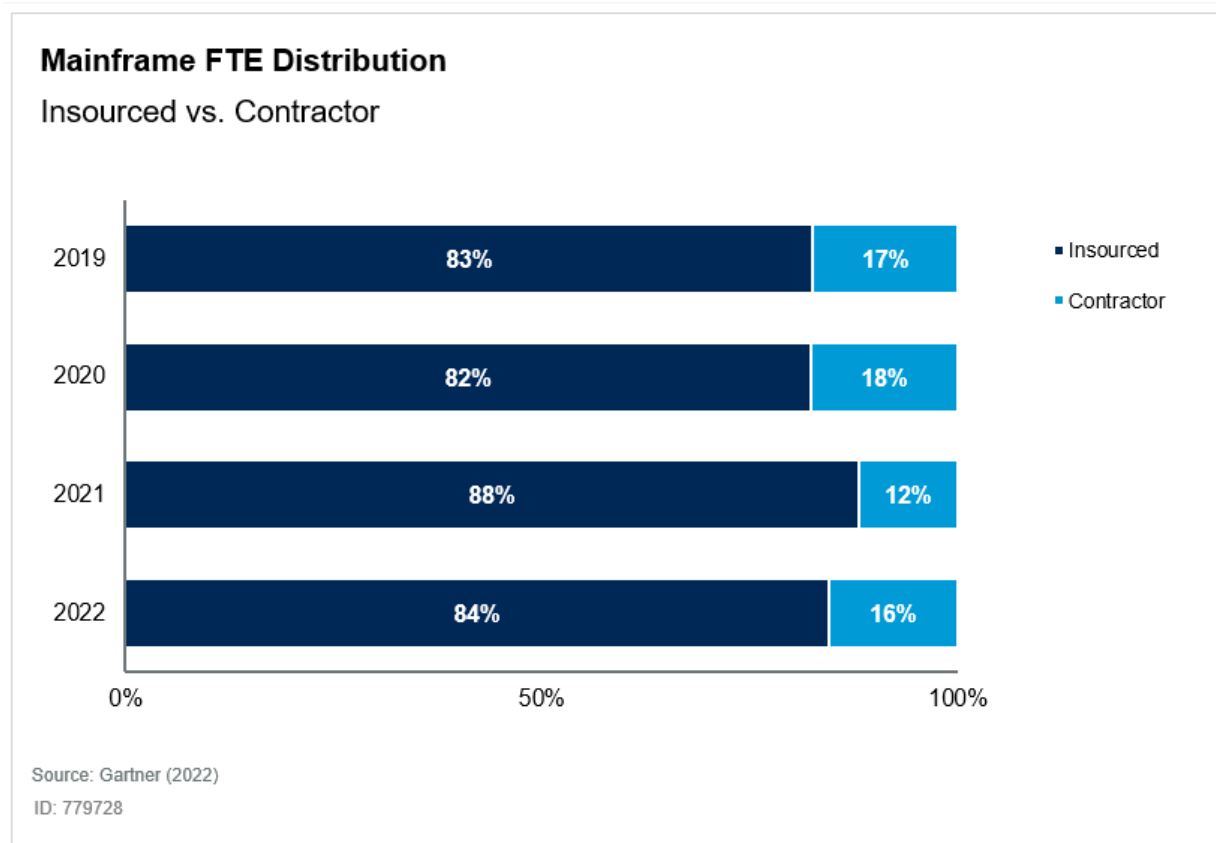


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### Mainframe FTE Distribution: Insourced Versus Contractor

The distribution of Mainframe headcount between insourced and contract FTEs can help provide a view of the Mainframe staffing strategy. IT contract labor or contractor usage can be an effective approach to maintaining flexibility and agility when business conditions are changing. However, keeping contractors for extended periods can be more costly and limit process standardization if the associated knowledge, IP and processes are not well documented and captured within the enterprise.

Figure 5: Mainframe FTEs: Insourced vs. Contractor



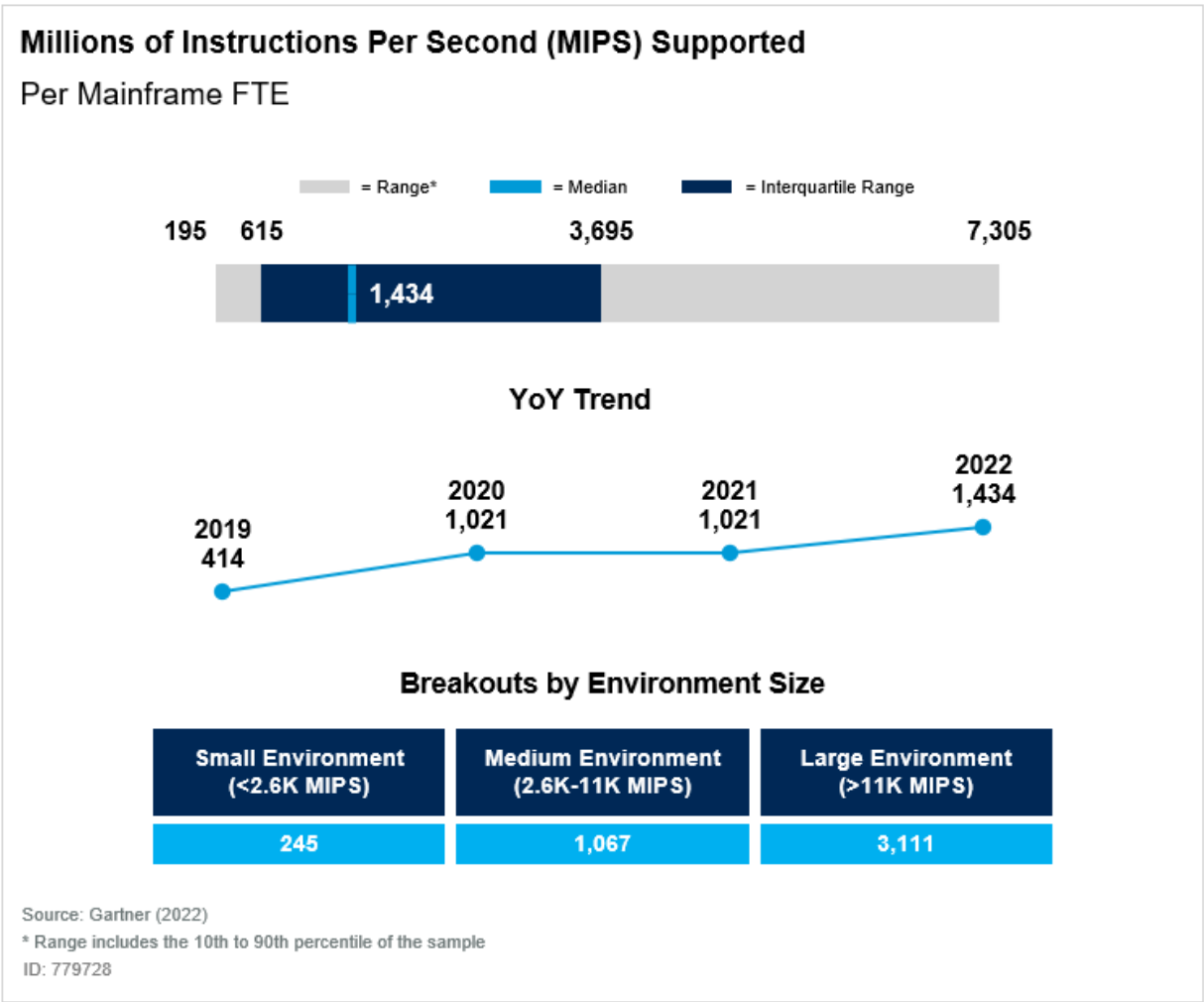
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### Installed MIPS Supported per Mainframe FTE

This is the core productivity metric and provides a look at dedicated FTE output levels. Understanding the productivity of your IT staff in terms of instances supported can be very helpful in establishing an efficient and effective workflow as well as ensuring your support staff is the “right size.” Productivity levels can be further understood when examined in tandem with service level metrics such as the number of cores per instance, virtualization rate and availability percentage. It is important that it is not only viewed as a fixed objective but also with respect to the quality of service delivered and business requirements.

If your support staff is supporting more than the median of the published sample, you can consider the following questions: *Is this level of productivity sustainable? How will you adapt to required future growth or complexity? Are there any issues such as language, time differences, and non standard technology handled?*

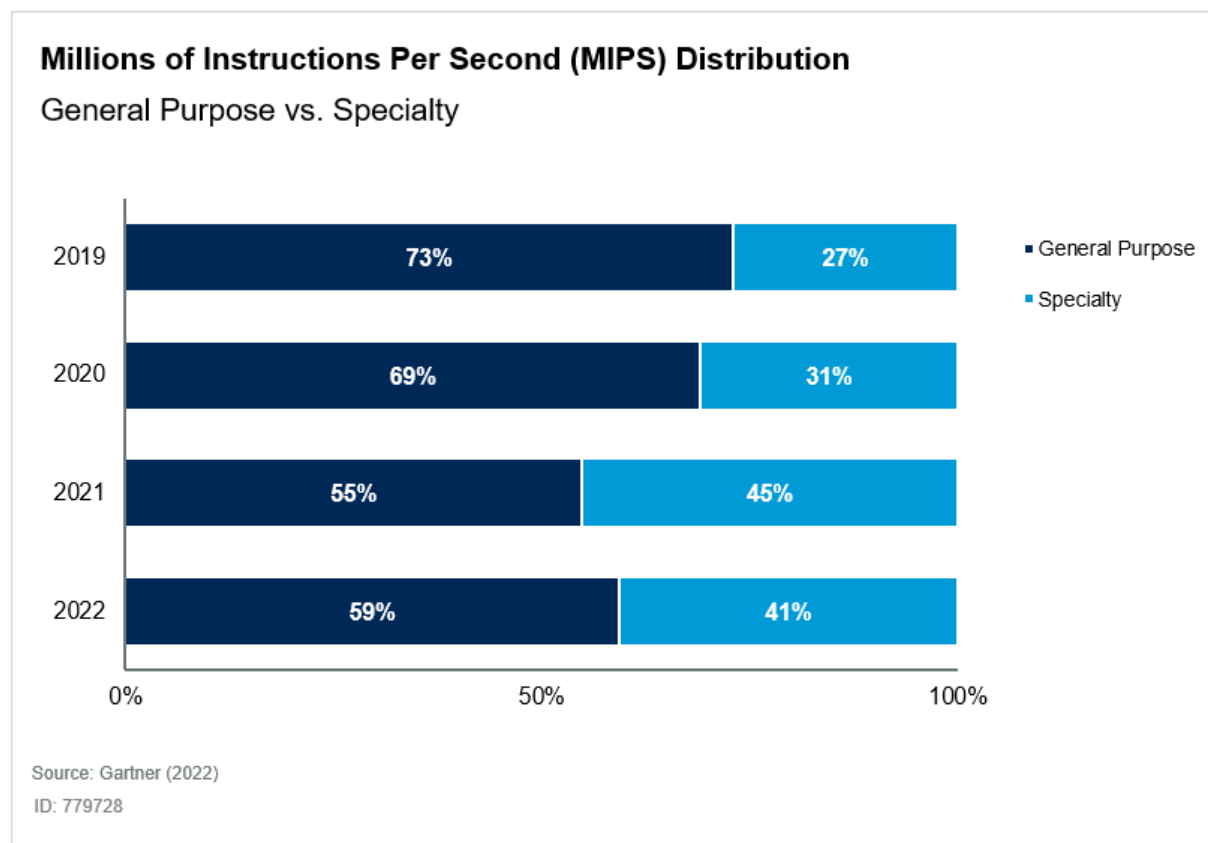
Figure 6: Installed MIPS Supported per Mainframe FTE



Mainframe Installed MIPS Distribution: General Purpose Versus Specialty

In addition to the distribution of Mainframe installed MIPS by environment size, it is also relevant to understand the ratio of General-Purpose to Specialty MIPS, as a greater proportion of Specialty MIPS in an environment is likely to result in a lower overall cost per Installed MIPS.



**Figure 7: Mainframe Data Demographics: MIPS Distribution by Type**

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## Conclusion

A successful IT performance measurement program communicates metrics that are important to a target audience. [Kick-Start Your IT Value Story With Metrics That Matter](#) provides additional insight into overall performance management beyond spending and staff.

By quantifying spending relative to a defined framework, IT leaders can determine relevant cost drivers through understanding:

1. Top level efficiency and productivity metrics
2. Variances below the top level of spending
3. The relation of one metric to another
4. Environmental factors within the organization

## Recommended by the Authors

*Some documents may not be available as part of your current Gartner subscription.*

[“IT Key Metrics Data 2023: Infrastructure Measures — Executive Summary”](#)

[“Cost Optimization Lessons Learned Through a Crisis”](#)

[“The Disappearing Data Center Opportunity for Infrastructure and Operations Leaders”](#)

[“Optimize Your Mainframe Processes and Costs Using Gartner’s A-B-C Negotiation Methodology and Checklist”](#)

[“IT Score for Infrastructure and Operations”](#)

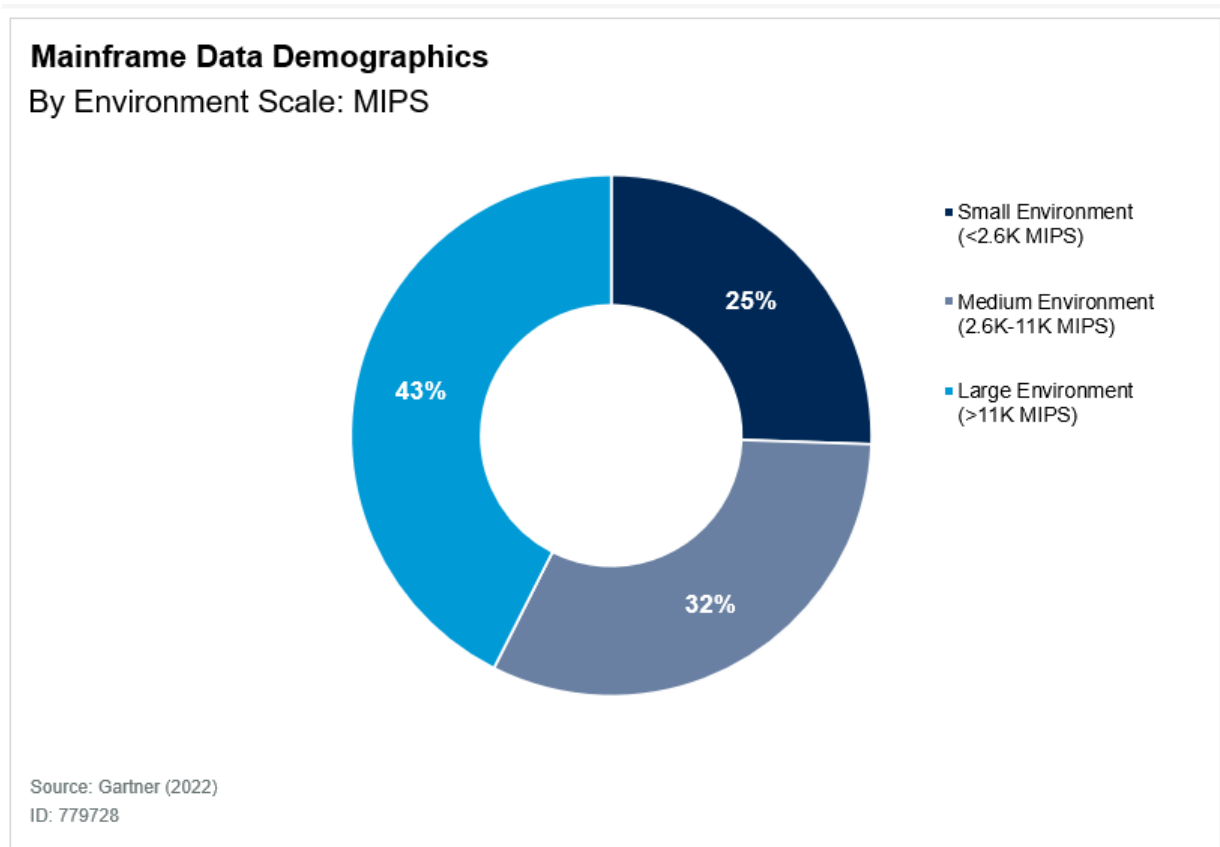
## About This Research

This research contains relevant database averages, medians and ranges from a subset of metrics and prescriptive engagements available through [Gartner Benchmark Analytics](#) consulting-based capabilities.

Calculations were made using worldwide observations.

## Evidence

To offer some insight into the characteristics of the Mainframe analysis data, the figure below outlines the distribution of the Mainframe analysis data across the “Small,” “Medium” and “Large” environments as defined in the legend.

**Figure 8: Mainframe Data Demographics: By Environment Size**

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## Document Revision History

IT Key Metrics Data 2022: Infrastructure Measures — Mainframe Analysis - 16 December 2021

IT Key Metrics Data 2021: Infrastructure Measures — Mainframe Analysis - 18 December 2020

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