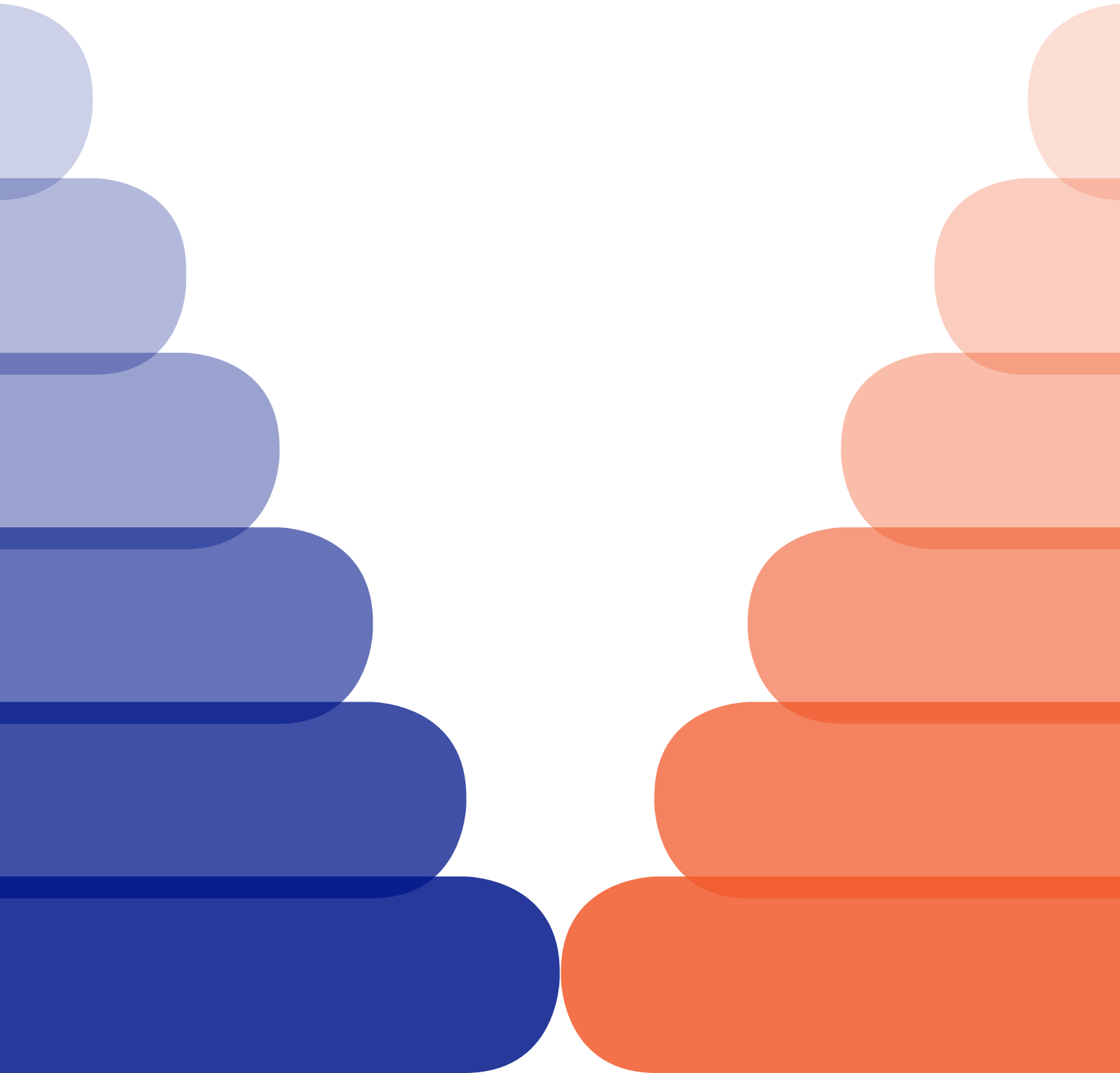
SIX STEPS
TO A BETTER MAINFRAME COST STRUCTURE

GLOBAL TECHNOLOGY SOLUTIONS GROUP



THE MAINFRAME IS ALIVE AND GROWING

The death of the mainframe was famously predicted for 1996. Not only is the mainframe still alive, the number of MIPS in production has doubled over the past five years, although on a somewhat smaller installed base. If you are reading this, the mainframe is either:

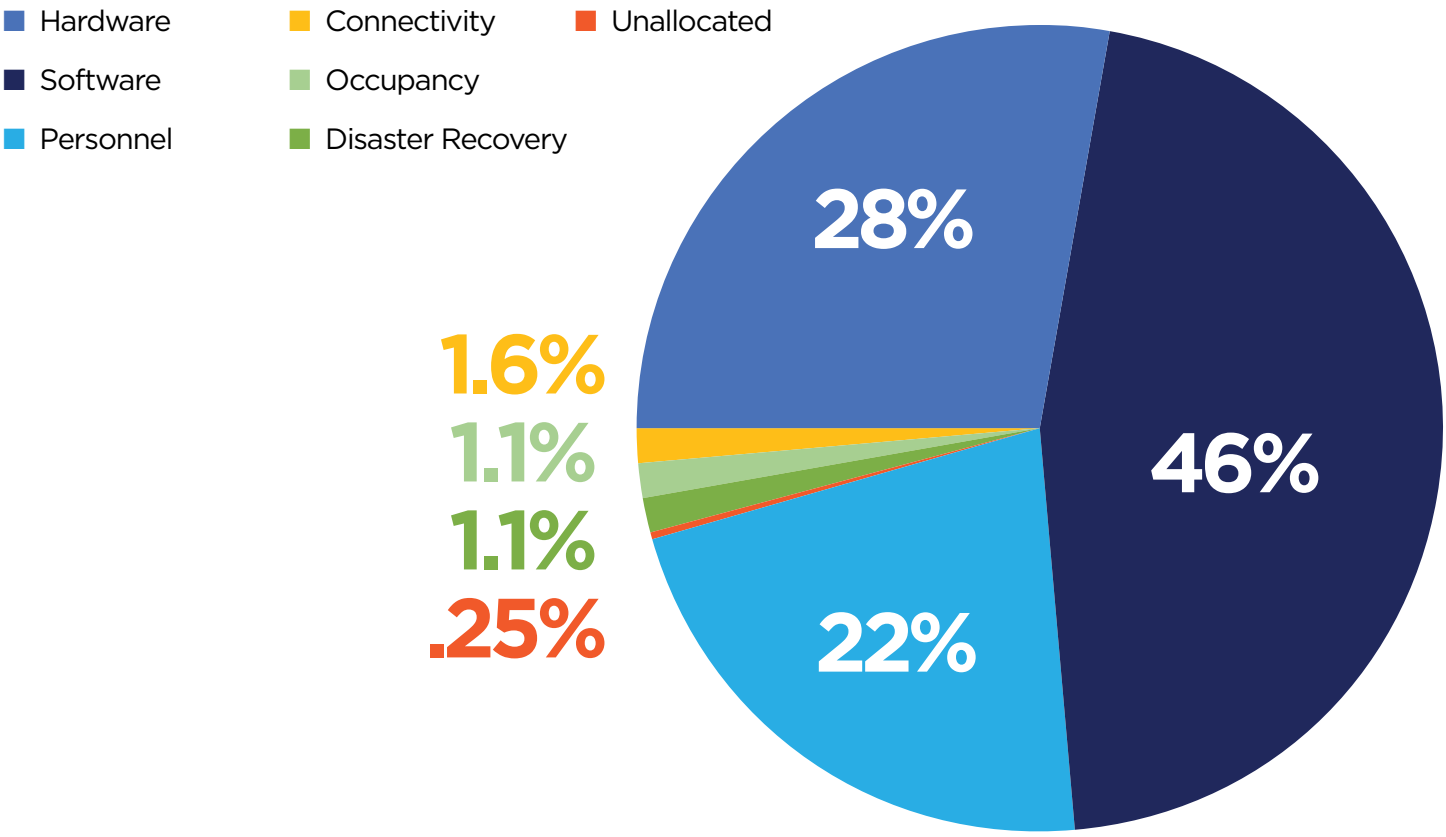
- Still mission critical for your organization
- On a track for retirement — but you are under pressure to run the platform effectively until that time

With all the challenges to the economy, your leadership undoubtedly wants you to reduce cost. With all the economic challenges, with no reduction in performance or availability. And, because you have been doing this for a while, the “low hanging fruit” is long gone.

STEP ONE: UNDERSTAND THE COST DRIVERS

Gartner has assessed the cost elements for the mainframe as 28% hardware, 46% software and 22% personnel. The average shop spends only the remaining 4% for connectivity, occupancy, disaster recovery and unallocated.

MAINFRAME COST BY ELEMENT



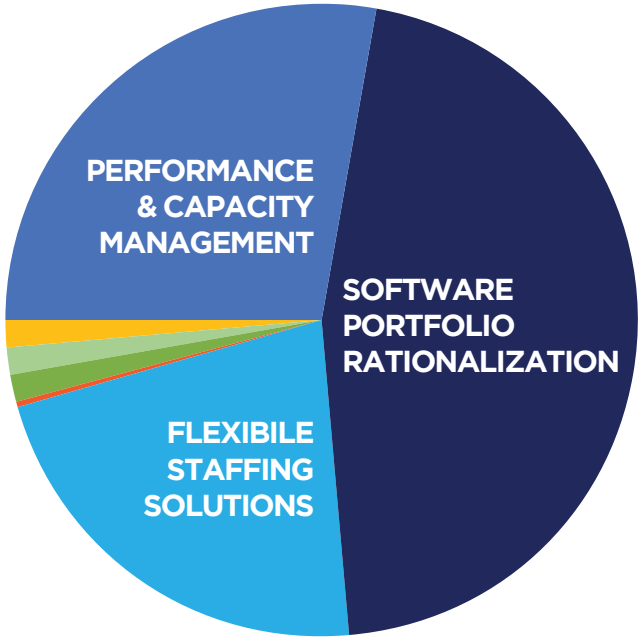
STEP TWO: ESTABLISH THE PROGRAM

Gartner is right: this cross-disciplinary effort involving procurement, engineering and operations requires program management.

The typical spend associated with a mainframe contract negotiation alone is significant both today **and** as baseline for the next contract three years out.

At GTSG, program management is a core competency. It must be.

- Hardware
- Software
- Personnel
- Connectivity
- Occupancy
- Disaster Recovery
- Unallocated



GTSG's approach, while straightforward, is deeply dependent on detailed analysis and execution.

Performance & Capacity Management carefully planning the hardware requirement and attacking the peak four-hour usage which drives cost.

Software Portfolio Rationalization while creating negotiation leverage and reducing shelfware.

Flexible Staffing enabling execution; eliminating the need for full time resources to perform part time work.

All supported by a strong negotiation strategy as marketplace economics are in favor of the buyer: MIPS have doubled across a smaller supplier base.

STEP THREE: ESTABLISH PERFORMANCE AND WORKLOAD MANAGEMENT

Shrinking teams have made it more difficult to maintain the once-standard discipline of mainframe performance and capacity management. GTSG uses the complementary techniques of performance, workload and capacity management in an effort to ensure that our clients can avoid upgrades, achieve SLAs, or even downgrade a processor in a sunset scenario.

For those who are interested, we have a longer paper on this. For our purpose here, suffice to say:

Performance Management is the practice of iteratively eliminating or reducing the consumption patterns of a given job, schedule, transaction, or query. "Tuning" is a term commonly used to describe this process; it is MIPS elimination/reduction — plain and simple.

Workload Management is the practice of prioritizing workloads and delivering computing resources where they are needed to meet SLAs. Almost always overlooked, Workload Management is *critical to avoid unnecessary processor upgrades.*

Capacity Management is the practice of modeling future computing resource requirements based upon historical consumption, achievement of SLAs, business forecasts, the effects of the tuning work, and anticipated business events. Nothing is worse than having to brute-force a capacity upgrade and deal with the fallout of software licensing, board proposals, etc. that accompany an unexpected expenditure.

ELIMINATE EXTRA TOOLS

REPLACE PRODUCTS WITH EXISTING FEATURE

COMPETITIVE DISPLACEMENT OF A LOW USE PRODUCT

COMPETITIVE DISPLACEMENT OF A HIGH USE PRODUCT

STEP FOUR: RATIONALIZE MAINFRAME SOFTWARE

PART ONE:
Eliminate tools used by a small audience.

The size of the audience is not the only determinant of importance but it is a start. Survey all the tools; quantify the audience size; assess the impact of possible elimination; propose alternatives if the impact cost is greater than the tool cost.

PART TWO:
Replace a product with an existing feature.

z/OS has numerous features today that might not have been available when you purchased a specific-function product. We exploit these features. This involves training of the user audience – but the payback is often substantial. Politically, it is hard for anyone to argue against using a robust feature for which you are already paying.

PART THREE:
Competitive displacement of a low use product.

Picture an expensive product used by a small group within your organization. If you cannot do without the product (Part One) and cannot replace it with a built-in z/OS feature (Part Two), consider a competitive displacement where you swap Vendor A for Vendor B with locked in pricing for the term most appropriate for you. Then do the math on the training and migration required. Mainframe software deals abound these days: growing MIPS and a consolidating installed base lead to customer leverage.

PART FOUR:
Competitive displacement of a high use product.

While this is the toughest sell, consider this when Parts One through Three have not yielded enough. If the finances are supportive of acquisition, implementation and training, then it is a decision of benefit vs. disruption.

STEP FIVE: NEGOTIATE FROM STRENGTH

Frequently, a mainframe software contract structure does not provide for cost reduction to correspond with a reduction in MSU consumption. We work with our clients to determine viable approaches that do not put undue burden upon your organization. The financial goal is to reduce cost per transaction, through a better structure. We document how we will reduce the rolling 4-hour average, once there is benefit to doing so: this is your future leverage once a deal is negotiated. We document a projected reduction in consumption DB2 specifically, associated with future workload movement and estimate sub-capacity dollar savings.

Development of contracting criteria. In this segment, we work to identify all the goals for a future financial arrangement as well as recognizing the shortcomings of the current contract(s). At the time, the previous arrangement was negotiated, perhaps no one anticipated a day when the mainframe would be a declining workload. For some today, that is the reality.

We evaluate the current arrangement in the context of positive factors (perpetual licenses) versus negative consequences (no change in run rate even if MSUs drop). We restrict additions to ELA of unnecessary products, both for focus in negotiations, and to eliminate the risk of adoption by a small audience of these products.

STEP FIVE: NEGOTIATE FROM STRENGTH (CONTINUED)

In addition to the "what is wrong today" introspection, we strive to think of possible leverage points with the various vendors involved – all for the purpose of achieving a renewal that embodies the most important of our future licensing criteria.

We dig deep. At the outset of the engagement, we collect and study:

Current financial arrangement with vendors – focused on shortcomings as our client entertains MSU reductions as a result of rehosting, tuning the sub-capacity rolling four-hour average, opportunistic software rationalization, and competitive displacement of select products

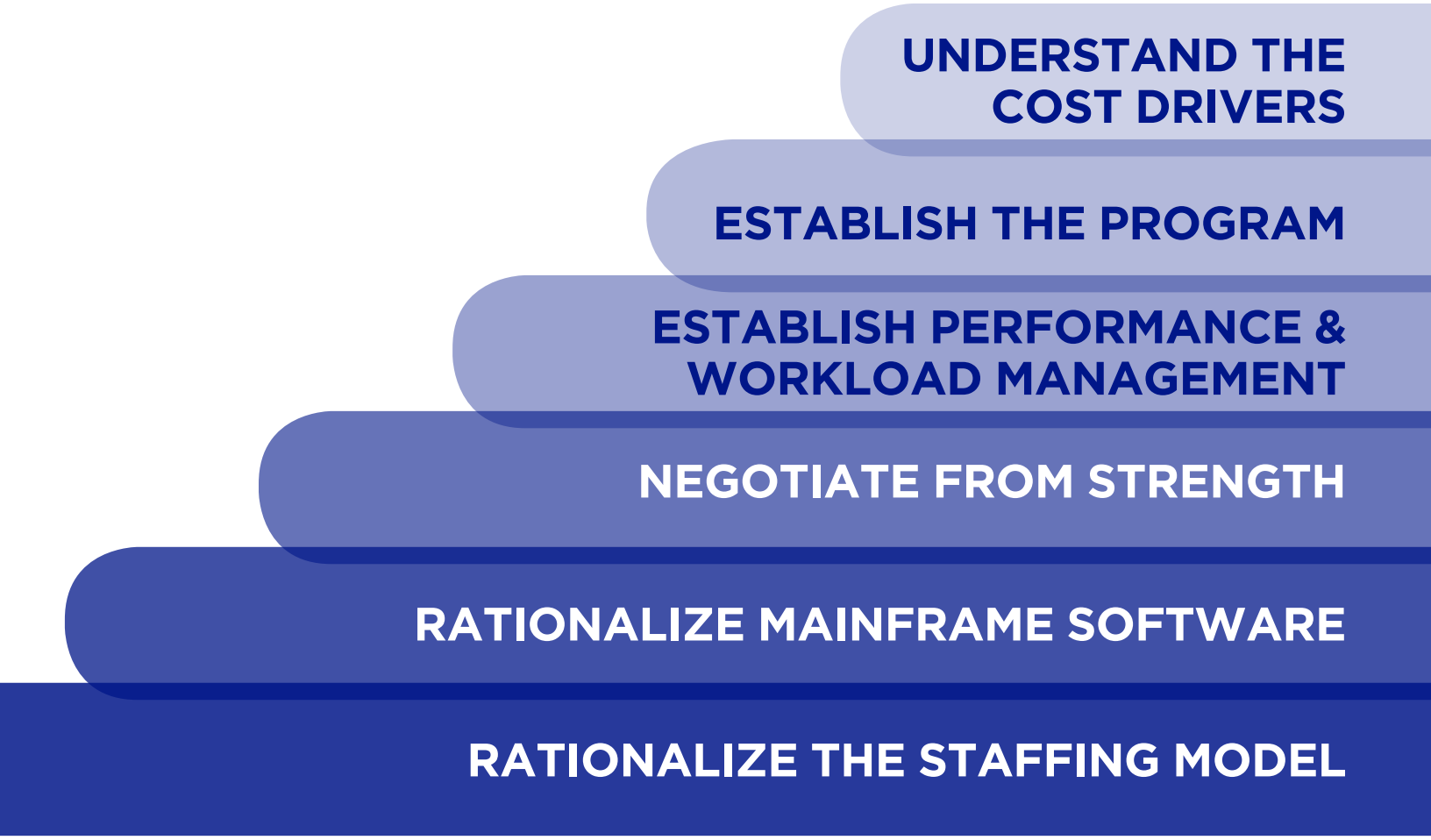
- Details of other contracts
- Entire ISV software portfolio; including the details of unutilized software
- Sub-capacity reporting for the past 6-9 months
- Current hardware configurations including vendors
- Holistic look at infrastructure including DR, extra data centers — what is going to happen
- Application rehosting plans

STEP SIX: RATIONALIZE THE STAFFING MODEL

Given the shrinking pool of mainframe experts, it is exceptionally rare that we reduce a percentage of the team. We help in looking at which skills are more effectively provided given the economics of a fractional resource model.

In most shops, if you have CICS, DB2, and perhaps IMS mixed in, there is a specialist for each. In some cases, the CICS expert might be able to support IMS or DB2 at a Systems Programming level but comes up short for DBA support.

In this scenario, rather than supplying three resources, we right-size to the environment. No longer must you staff with a fully burdened 40-hour resource. We provide what you need and allow for ramp up when you need it. We also contract to a gradual decrease in monthly charges relative to the workload being moved off the mainframe. It is not always perfectly linear...but it is directionally correct.



LET'S START NOW

It is our mission for us to help a client do the best possible job of preparing internally or for a negotiation. The sooner we begin, the more impact we can have.

With GTSG, you bring hundreds of years of mainframe practitioner experience to your mainframe effectiveness project.

To learn more, write us at **mainframe@GTSG.com** and we will set up a conversation.

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HYBRID CLOUD STRATEGY AND MIGRATION

Strategic Approach

- Business case development
- Transition planning
- Technical modeling
- Non-disruptive execution

Application Analysis Methodology and Tools

- Decomposition
- Affinities
- Wave planning

Project Leadership

Implementation Subject Matter Expertise

INFRASTRUCTURE SUPPORT SERVICES

Managed Services

- Multi-platform including DB & MW
- Service-level based or FTE-based
- Architecture, administration, programming, systems managment
- Remote or Onsite

Project Based Services

- Platform upgrades
- Workload migrations
- Implementation services
- Consulting and Assessment (performance, DR, HA....)
- Project Management

INFRASTRUCTURE TRANSFORMATION

Transition Services

- Insourcing/Outsourcing
- Knowledge transfer and interim support
- Application migration
- Service management design

Disaster Recovery Design and Implementation

High Availability Design and Implementation

Application Assessment and Deployment

- Reference Architecture
- Infrastructure Alternatives/ Recommendations
- Implementation/Migration

INFRASTRUCTURE OPTIMIZATION

Architecture Assessment and Design

Server Virtualization/Consolidation

Storage Optimization

Data life-cycle management

- Tiering
- Standardization/Automation

Application Decomposition Application

Re-design/Remediation Performance

Management and Tuning Latency

Analysis and Consulting