PPBE 2025 IT Budget
Template to support the Agency PPBE 2025 IT Data Call

Template Guidance

This template is designed to capture planned IT expenditures in support of the PPBE 20**XX** Agency IT Portfolio Data Collection. This excel template collects all IT planned obligations by NASA Project Code within the TBM+ framework. In the green tabs (Project Info, Budget Request, Solutions, Towers, and Cost Pools) prepare the report by entering the requested data.

• **Mission-Theme-Program-Project (MTPP):** All IT Investments shall be submitted in NASA's MTPP structure.

• **Report by Project Code:** The MTPP structure requires reporting by Project Code (PC) in the PPBE formulation budget structure and one template will be submitted for every Project Code that has IT content.

• **Reporting Responsibility:** The Contractor shall provide the required data in the CPIC report in support of the Center "Investment Owners." The "Investment Owner" of the Project Code is the government personnel responsible for the offical reporting the Project Code's IT content, regardless of which organization(s) execute the funds.

• **FY Years Reported:** The contractor report shall include data for Prior Year (PY)-2 through Budget Year (BY) + 4

• **Budget Request:** Reported IT obligations for each Project Code and shall be categorized as either Development Moderation & Enhancement(DME) and/or Steady State(SS).

• **IT Towers:** Each IT investment shall be categorized by the applicable IT Towers and Sub-Towers associated with investment. An investment is often comprised of multple IT Towers and Sub-Towers.

• **IT Cost Pools:** Each IT investment shall be categorized by the applicable IT Cost Pools and Sub-Cost Pools associated with the investment. An investment is often comprised of multiple IT Cost Pools and Sub-Cost Pools.

•**Soultions:** Each IT investment shall be categorized by the applicable Solution Type and Solution Category associated with the investment, unless the Federal Extension of the TBM Taxonomy applies. In this case, an IT investment shall be categorized by the applicable Solution Type, Solution Category, and Solution Name.

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Project Information

Investment Description:

This field is for entering a concise description for the investment. This description should explain the purpose of the investment and the program(s) it supports.

Description *Maximum Character Count* *255*

Cloud Usage Identification:

This field is for entering a concise description of any Cloud associated costs for the investment. This description should identify the type of Cloud services (see Cloud Definitions Tab) and, if available, the specific Cloud solution(s). *(If there are no Cloud costs are assoacited with this investment, enter Not Applicable)*

Description *Maximum Character Count* *255*

PPBE 2025 IT Budget
Budget Request

Budgetary Resource Request Table: Planned IT Obligations should be broken-out into **Development/Modernization/Enhancement (DME)** and **Steady State/Operation and Maintenance (O&M)** for FY2023 through FY2029. Report amounts in whole dollars for all fiscal years.

Whole Dollars

Budget Request Categories	PY-2	PY-1	PY	CY	BY	BY + 1	BY + 2	BY + 3	BY + 4
DME WYE Labor Dollars									
DME Planned Obligations									
Sub-Total DME	0	0	0	0	0	0	0	0	0
SS/O&M WYE Labor Dollars									
SS/O&M Planned Obligations									
Sub-Total SS/O&M	0	0	0	0	0	0	0	0	0
Sub-Total WYE Labor Dollars	0	0	0	0	0	0	0	0	0
Sub-Total Planned Obligations	0	0	0	0	0	0	0	0	0
Total Cost (Whole dollars)	0	0	0	0	0	0	0	0	0

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Solutions

Solutions Table

Use this table to capture the investment's TBM Solutions data. Definitions are provided in seperate tabs of this worksheet by Business Facing and Technical Facing Solutions.
- IT Cost is entered by Solutions Category, except for where the TBM Federal Extension applies regarding the Business Solution Type. In this case, IT Cost is entered by Solution Name (see Note).
- Total costs identified should equal the totals in the Budget Request Tab, Towers Tab, and Cost Pool Tab
- Investments will not likely have costs associated with all Solutions
- The version of the TBM Taxonomy is subject to change; the applicable version of TBM is identified in OMB Circular A-11.

Note: In addition to the generic TBM Business Solutions Type, the Federal Extension of the TBM Taxonomy provides options for agency specific "Business" Solution Types along with subsequent Categories, and Names that align to a particular agency's mission and is based on the Federal Enterprise Architecture Framework (FEAF). NASA's agency unique Business Solution Type is Transport and Space. NASA has one Solution Category under the Transport and Space Solution Type, which is Space Flight, Research, and Supporting Activities. Multiple Solution Names are available and are mostly aligned to the work within NASA's Mission Directorates.

Whole Dollars

Solutions Layer	PY - 2	PY - 1	PY	CY	BY	BY + 1	BY + 2	BY + 3	BY + 4
Business - Federal (Transport and Space)	0	0	0	0	0	0	0	0	0
Space Flight, Research & Supporting Activities - **Aeronautics Research**									
Space Flight, Research & Supporting Activities - **Aircraft Managemenet & Research**									
Space Flight, Research & Supporting Activities - **Earth Science**									
Space Flight, Research & Supporting Activities - **Space Innovation**									
Space Flight, Research & Supporting Activities - **Program Independent Flight Operations**									
Space Flight, Research & Supporting Activities - **Space Exploration & Operations**									
Space Flight, Research & Supporting Activities - **Space Science**									
Business - General	0	0	0	0	0	0	0	0	0
Product Management									
Sales & Marketing									
Manufacturing & Delivery									
Customer Service									
Shared & Corporate	0	0	0	0	0	0	0	0	0
Finance									
Workforce									
Vendor & Procurement									
Health, Safety, Security & Environmental									
Risk, Audit, & Compliance									
Legal									
Property & Facility									
Corporate Communications									
Workplace	0	0	0	0	0	0	0	0	0
Client Computing									
Communication & Collaboration									
Connectivity									
Delivery	0	0	0	0	0	0	0	0	0
Strategy & Planning									
Development									
Operations									
Support									
Security & Compliance									
Infrastructure	0	0	0	0	0	0	0	0	0
Compute									
Data Center									
Network									
Storage									
Platform	0	0	0	0	0	0	0	0	0
Application									
Data									
Total	0	0	0	0	0	0	0	0	0

TECHNOLOGY BUSINESS MANAGEMENT SOLUTIONS DEFINITIONS

Business Facing Solutions

Business-Facing solution types are more forward-facing and obvious to every day users in supporting the organization's operations and mission. They are said to support the"what" of IT.

Solutions Type and Definition	Solutions Category	Solutions Category Definitions	Solutions Name	Solutions Name Definitions
Workplace: include the client computing devices, software, and connectivity to enable the workforce to access business applications; to communicate with other employees, partners, and customers; and to create content using productivity software. These are always "user-facing" solutions.	**Client Computing**	**Provide physical and virtual devices and associated software and connectivity that enable users to interact with the enterprise's technology systems and third-party systems.**	Computer	A selection of IT-provided computers, workstations, laptop, or tablet configurations. Each type may be ordered with additional memory and storage. Standard corporate image will be loaded on each device. Requestor may order optional software through the Productivity services. Includes network and remote network access. Standard support package including security, back-up, antivirus, updates and patches, remote access, centralized service desk.
			Mobile	A selection of IT-provided smartphone configurations. Includes network access. Standard support package including security, encryption, back-up, updates and patches, remote access, and centralized service desk.
			Bring Your Own Device	Enables users to bring in their own personal computing devices (laptop, tablet, smartphone) and connect to the organization's corporate network in accordance with the organizatan's security and other standards. Standard support may include connectivity to access business applications, information, and other technology resources, as well as other security, back-up, updates and patches, remote access, and centralized service desk.
			Virtual Client	The virtualization of desktop and application software enables PC and tablet functionality to be separate from the physical device used to access those functions – whether a fixed or mobile workspace environment. Virtual Workspaces may have different, pre-configured packages of software application and enable access from multiple devices. Advanced desktop management provides higher levels of flexibility, security, backup, and disaster recover capabilities.
	Communication & Collaboration	**Allow end users to communicate with other people via email or chat, to collaborate through shared workspaces, and to create and print content such as documents, presentations, videos, and other forms.**	Collaboration	A selection of collaborative software offerings that enable people to work together to achieve common goals across locations and time zones. Enables the sharing of documents and deliverables across distributed users.
			Communication	Enables users to communicate with other users, partners, or customers. This communication may occur via electronic mail, calendaring, messaging, social communities, audio conferencing, video conferencing and voice calls. More robust, unified messaging service offerings provide file transfer, file sync and share, embedded images, clickable hyperlinks, Voice over IP (VoIP) and video chat.
			Productivity	End user application software enabling the creation and distribution of information in a variety of formats including: documents, presentations, spreadsheet, modeling tools, project management, databases, desktop publishing, web design, graphics and image editing, audio/video editing and CD/DVD recording.
			Print	A variety of peripheral devices that enable the distribution of information. Specialized devices may offer one or all these services - print, copy, and fax. Printing output creates a "hard copy" of digital documents, presentations, spreadsheets, etc. Scan inputs a hardcopy document into a digital format for a computer to use.
	Connectivity	**Provide users with access to the enterprise's technology systems. This includes wired and wireless access while on premise and remote access while away from the enterprise.**	Network Access	A set of connection services which enable users to access a private or public network from their client computing device. Once connected, as part of the network they can access business applications and information; and can communicate and collaborate with other users on the network. Often, this may be bundled with a Client Computing service.
			Remote Access	A set of connection services which enable users to access the organization's internal private network from their client computing device when away from the corporate facilities. Once connected, the user can access the organization's business applications and information. Often, this may be bundled with a Client Computing service.

Business - Federal - Transport & Space: Technologies and services that support the functions of transportation modes, including space exploration and their associated services.	**Space Flight, Research, & Supporting Activities**	Technologies and services that support the development and operation of space transportation systems, basic scientific research connected with outer space, research and demonstrations designed to promote terrestrial applications of technology developed through space research, and development of new space technologies for future flight missions. Also includes tracking and data relay support for the National Aeronautics and Space Administration space science and applications for flight missions.	Aeronautics Research	Technologies and services that support research and development conducted that directly benefits today's air transportation system, the aviation industry, and the passengers and businesses who rely on aviation every day. This includes the design, development and testing of advanced technologies that will make aviation much more environmentally friendly, maintain safety in more crowded skies, and ultimately transform the way we fly.
			Aircraft Management & Operations	Technologies and services that support the management of an aircraft fleet to include such items as training, aircraft maintenance, logistics, logged hours, inventory, aircraft suitability, study, and flight scheduling.
			Earth Science	Technologies and services that support the study of the Earth's structure, properties, and processes, to understand the present features and the past evolution of Earth. This includes the fields of study concerned with the solid Earth, its waters, and the air that envelops it. This enables mapping the myriad of connections between our planet's vital processes and the effects of ongoing natural and human-caused changes.
			Program Independent Flight Operations	Technologies and services that support flight operations not directly involved with the needs of a program. This may include training, aircraft maintenance, logistics, logged hours, inventory, aircraft suitability, study, and flight scheduling.
			Space Exploration & Operations	Technologies and services that support activities related to successful completion of space missions. Includes but is not limited to activities related to the development operations and advancement/evolution of systems enabling human exploration in and beyond low-Earth orbit, launch/landing services, space habitats and laboratories, communications and navigation systems, crew and crew support systems, human research and health maintenance, radiation protection, space power systems, command and control, ground processing, space transportation, space communications, and other operations enabling U.S. human spaceflight commercialization. Supports both human and robotic exploration programs from mission/system development through operations, and maintenance.
			Space Innovation	Technologies and services that support the research and development of transformative and advanced space technologies and other innovations for use in spaceflight, space stations, satellites, space exploration and space warfare.
			Space Science	Technologies and services that support all of the scientific disciplines that involve space exploration and the study of natural phenomena and physical bodies occurring in outer space. It covers a broad range of disciplines including meteorology, geology; lunar, solar, and planetary sciences; astronomy and astrophysics; space medicine; astrobiology and life sciences.
Business - Generic enable product and external customer focused business capabilities that enable the business to win, se+A21rve, and retain customers.	**Customer Service**		Customer care	Enables multi-channel customer communication (ACD, CTI, IVR, speech recognition, predictive dialing, email response, change, co-browse), knowledge management, customer service workforce automation, and field service.
			Order Management	Enable order management, contract management, pricing optimization, billing and payment processing.
	Product Management		Product Development	Enables product design and development including innovation management, computer aided design, simulation visualization, enterprise feedback and social product feedback/crowdsourcing.
			Product Planning	Enables product life-cycle management including requirements management, product data management, change and configuration management, manufacturing process management, quality management, product analytics, and risk and compliance management.
	Manufacturing & Delivery		Resource Planning	Enable demand forecasting, demand planning, and partner sourcing.
			Manufacturing	Enables prototyping, production scheduling, fabrication and manufacturing of tangible products, equipment maintenance, software development of digital products and quality testing.
			Inventory & Warehousing	Enables inventory management, supply chain scheduling, warehouse management and returns management.
			Product Delivery	Enables the logistics and delivery of physical products including supply-demand matching, fleet/ transportation management, tracking systems and GIS/routing optimization.
			Service Delivery	Enables the delivery of nontangible services including resource scheduling, engagement management, professional services, education, and service quality.
	Sales & Marketing		Customer Analytics	Enables customer and product analytics and voice of the customer input.
			Customer Sales	Enables B2C commerce platforms, B2B commerce platforms, product configurations, POS platforms and payments.
			Marketing & Advertising	Enables marketing automation, online marketing, mobile marketing, and ad technologies.
			Sales Force & Channel Management	Enable sales force automation, sales enablement and training, partner relationship management and pricing management.

Shared & Corporate: Enable internally focused corporate services which automate and support the organization's internal operations. These are often referred to as business support or shared services which enable the core operating capabilities of an enterprise or organization (e.g. Finance, Human Resources, Legal, etc.).	**Finance**	Enable the financial management of the enterprise.	Planning & Management Accounting	Applications and services that enable the strategic allocation of funds in support of established future and current business goals, including planning, budgeting and forecasting, ad-hoc analysis and reporting to inform and guide leadership in the ongoing determination and understanding of business strategy related financial goals, incentives, progress and impact. Specific service offerings may include: planning/budgeting/forecasting, cost accounting & control, cost management and financial performance.
			Revenue Accounting	Applications and services that enable the comparison of revenue targets to actual achievement. Supervisory responsibility over all transactions and entries (receivables, payables, intercompany movements) that pass into the final periodic accounts of an entity, and support int./ext. analysis and communication of profit on a monthly, quarterly or annual basis. (Determination of whether this includes the actual lifecycle processing of payments due from customers, is based on entity type, sector and scale - see Accounts Receivable). Specific service offerings may include: customer credit, invoicing, accounts receivable, and collections.
			Accounts Receivable	Applications and services that enable the complete lifecycle of invoicing and receipts processing to ensure the business is paid by its customers, including Invoicing, payment receipt, processing, error handling, PO setup (as a supplier) reconciliation, reporting and collections.
			General Accounting & Reporting	Applications and services that enable financial statement preparation (balance sheet, statements of income, cash flows, shareholders' equity etc.) in accordance with accepted accounting principles. Also includes responsibilities to classify, determine, analyze, interpret, consolidate and communicate financial information to support up-to-date business decisions for better management & control, and regulatory/legislative compliance (in conjunction with Management Accounting) of costs, assets & equipment. In certain contexts can include grant activities related to the funding and reporting of non repayable funds provided to corporate, academic or agency entities. Specific service offerings may include: general accounting, fixed asset accounting, grant management, and financial reporting including regulatory and compliance reporting.
			Project Accounting	Applications and services that enable managing accounts for large investment projects, often requiring significant capital outlays over multiple years. Managing investment against major milestone, product or activity expenditures during the course of a project, supporting project, portfolio and program leadership with insight to understand their progress & efficiency toward target. Specific service offerings may include: capital planning, capital project accounting & analysis.
			Payroll & Time Reporting	Applications and services that enable the handling of reported time, and the ongoing processing and payment of wages, salaries and benefits, including quality assurance and error handling (but excl. benefits management). Also inclusive of time keeping, and the capture, aggregation, measurement, validation and transmission of staff time. Specific service offerings may include: time reporting payroll, and payroll taxes.
			Accounts Payables & Expense Reimbursement	Applications and services that enable the processing of payments due to suppliers, lenders and other operating expenses, including those related to employees. Supports the development of policies and procedures around processing of accounts payable & employee expense reimbursement across the entity. This process often includes the receipt & review of invoices and reimbursement requests, payment processing, PO & payment issuance via check, wire transfer or other forms of payment transfer. Specific service offerings may include: accounts payable, expense reimbursement, corporate credit cards.
			Treasury	Applications and services that enable the management and optimization of daily liquidity, excess cash, and financial risk via investment activities (e.g. hedging, debt instrument purchase/sale, overnight and short term institutional investments, and funds transfers) focused on supporting ongoing business operations across the entire company, or regionally. Also includes the governance, control, assessment and risk management activities required to ensure effectiveness. Specific service offerings may include: Treasury policies & procedures, cash management, in-house bank accounts, debt & investment, hedge transactions.
			Tax	Applications and services that enable managing the organization's financial accounts specific to the world-wide management, optimization and payment of tax, and related evidence & documentation. This includes, planning, estimations & analysis of the tax position and impact, related transfer pricing strategies, tax return preparation, timely payment, and required authorizations. It also encompasses the orchestration of record retention in support of regulatory requirements and internal policy. Specific service offerings may include: tax strategy, tax planning & analysis, transfer pricing, and tax processing.
	Workforce	Enables management of the employees and contractors of the business or organization. In the broadest terms, it includes the activities to select, recruit, develop, reward, retain, counsel, and retire employees. Includes the management of employee information including workforce analyt	Recruitment	Enables determining and handling employee recruiting, sourcing and selection, including requirements gathering; advertising; order creation; agency placement; application receipt, review, filtering; candidate & agency contact; applicant screening & investigations; offering & negotiations; records management. Can also include prior employees.
			Employee Transitions & Seperation	Enables managing employee (and less commonly vendor staff) transitions of a vertical, horizontal, geographic, mission, or structural nature, including management & administration of programs for: foreign assignment, reassignment, re-deployment, promotion/demotion, separation, outplacement, leave of absence, repatriation, and retirement
			Workforce Management	Enables managing employee focused processes and information for workforce analysis & reporting; inquiry & resolution; employment verification; HR data / information; refreshing / updating indicators of employee retention and motivation, working with time & attendance systems (excluding items like actual survey or assessment delivery).
			Performance, Retention & Reqards Management	Enables creating frameworks for, and performing the management & administration of, programs for rewarding, motivating, and recognizing employees with the objective of retaining them and enabling career path growth (incl. distributions).
			Benefits Management	Enables the management, administration & processing of employee benefits, benefit plans, staff enrollment, claims, funding & entitlements; and includes analysis and planning, provider selection, employee communications & education, and regulatory compliance.
			Policy Management	Enables creating strategies, standards, and supporting policy, for purposes of setting and managing standards of conduct, corporate and legal HR compliance and breaches, skills and competencies, and resource Performance, Rewards & Transitions. Includes planning, supervising and implementation of workforce policy inclusive of modeling, analysis, and reporting.
			Employee Development	Enables employees (and less commonly contractors/providers), with skills, knowledge, and/or capability development, and education. This extends to new hire onboarding / orientation; technical or business skills training; safety, security, conduct, ethics & compliance training; procedural and other legal or organizational aspects. (Excludes education as part of employee Transitions). Also includes program & course creation, delivery, management, and reporting
			Employee Communications & Relations	Enables crafting and execution of employee communications plans, its supporting messages, distribution channels and formats, to initiate interaction for: promoting horizontal or vertical employee engagement across the organization; creating awareness (e.g. of new policy, practices, or other internal / external events or actions of relevance); assessing satisfaction and engagement levels and drivers.
	Vendor & Procurement	Enables the procurement of goods and services required for a business to enable its activity including development of sourcing strategies, vendor selection, contract negotiations, ordering of materials & services and ongoing vendor and contract management.	Sourcing and Procurment	Enables creating strategies, standards, and processes for procuring goods and services from approved sources. Establishes a procurement process that describes the approach, policy, and guidelines for purchasing activities including evaluation & sourcing of suppliers. Creates sourcing relationships to continuously improve price performance. Re-evaluates and assesses of purchasing activities, standards, pricing and impact across the value chain and supplier landscape
			Supplier Management	Enables evaluating supplier options to select the most effective, efficient, and low risk suppliers. Validates selected suppliers. Use internal/external data, analysis, and feedback to rank and manage strategic and non-strategic suppliers to optimize vendor spend and output, including the ongoing management and reporting of supplier performance (e.g. output quality, delivery cycle times). May also include survey and research activities.

			Contract Management	Enables the intake and management of vendor contracts. Keeping contracts current with routine evaluation. Ensure proactive dissemination of knowledge to key stakeholders regarding renewals, expirations, price changes, volume thresholds or other contract aspects, to provide adequate lead times and avoid lapses in service, or surprise / unplanned expenditures
	Health, Safety, Security, & Environmental (HSSE)	Enables management to provide a safe environment for the organization, environment and local residents including policy, oversight, healthcare, occupational safety, and threat assessment	Policy & Governance	Enables determining the desired outcomes, obligations, conduct, and impacts related to personal and environmental health and safety. Creating and implementing the HSSE program. Train and educate employees of the on the HSSE program. Oversee and manage the HSSE program.
			Oversight & Enforcement	Enables monitoring and oversight of policy adherence and enforcement activities (including investigations) related to environmental, health and safety standards, should activity fall outside of defined processes, regulations, or legislation.
			Healthcare Services	Enables the definition and structuring of health services provided to/by the workforce, to promote preventative health and basic treatment, including the provision of on-site health services.
			Occupational Safety	Enables the programmatic evaluation and management of risks & opportunities that may affect industry-specific or role-related personal health and safety of employees, contractors, or other third parties. Provide required compliance and reporting as required by local and national governing bodies
	Risk, Audit, & Compliance	Enables management to proactively measure and mitigate the risk of the business and ensure adherence to regulatory requirements	Risk Management	Enables establishing umbrella frameworks, management activities, policy and related procedures and requirements for the entire organization, to defend against risks that may negatively impact the viability, growth, performance, health, stability, competitiveness, preparedness, or reputation of an ongoing concern, state, product or service. Ensures the identification, detection, assessment, monitoring and communication of risk and the execution of risk management activities across all levels of the organization, including all risk facets, including but not limited to sector, organization, operations, compliance, data, personal privacy, cyber, espionage, geo-political, etc
			Breach Management & Remediation	Enables administering the efforts and activities for breach assessment / estimation of impact and causality, as well as containment and remediation efforts. This may require the creation of plans for corrective action, even in collaboration with government agencies and pertinent professional services firms specialized in remediation efforts relevant to the organization's operations. Includes generation of new recommendations for implementation by Risk Management to be embedded as part of the ongoing capability/process
			Business Continuuity Planning & Management	Enables the plans, processes and resources required to rapidly adapt and respond to any internal or external disruption, threat or event that may present an opportunity or result in degradation or catastrophic failure of business operations.
			Auditing	Enables the internal or external planning, preparation, execution and review of internal control mechanisms, policies, and procedures in order to manage internal controls. Includes observation, reviews, interviews, fact-finding and the generation of recommendations and designs of control activities to be implemented. Monitor and review control effectiveness, remediate control deficiencies, and enable compliance functions. Can also include the implementation and maintenance of technologies and tools to enable internal controls-related activities.
			Investigations	Enables following up on a breach of standard operating procedures to identify, locate and understand the impact of the breach. An investigation can include searching, research, interviews, evidence collection, data preservation and various methods of investigation, as well as the gathering and documentation of findings & observations, and reporting of them.
			Records Management	Enables managing codified information in an organization throughout its life cycle and state/form, from the time of creation or inscription to its access and eventual disposition. This includes identifying, classifying, storing, securing, retrieving, tracking, and destroying or permanently preserving records, including digital and physical.
	Legal	Enables legal counsel to support the organization's governance and operations including discovery, litigation, contract reviews and intellectual property protection	Legal Counsel	Enables providing guidance and legal practices to abide by the law involving the practical application of legal theories, laws, regulations, and knowledge to govern the organization's messaging, product, and business operations. This includes the safeguarding (incl. litigation) and defense of intellectual property, brand value, confidential information, corporate and personal exposure to liability (physical or environment injury, cyber etc.) and many other forms and applications of law.
			Case Management	Enables managing the (mostly) administrative lifecycle of legal cases, including matter management, time and billing, document completion and submittal, monitoring case status, scheduling hearings and meetings, time and billing, orchestration of litigation support, collaboration and communications, record storage and search.
			Contract Review	Enables reviewing and negotiating terms to reach a final draft of a contract that is acceptable to all parties. Contracts may include non-disclosure agreements, master service agreements, statements of work and other types of contracts
	Property & Facility	Enables management to provide the facilities for the organization including development & space planning, physical security, workplace services, fleet management (non logistics), food services and the maintenance of facilities and equipment	Development & Space Planning	Enables planning the use, services, acquisition, and construction or build out, of non-performing or performing real property (whether owned or leased) for the organization. Execution of the planning, approvals, and acquisition of a site, for the build out or installation of real property or assets that may or may not yield direct income or house staff, equipment, or inventory. Creation of long-term vision, strategies, and standards for acquiring, developing, and managing purchased / leased / retained property and improvements.
			Workspace Services	Enables provisioning workspaces and related assets, and management of that provisioning effort. The orchestration and/or installation of office, shared community or light industrial spaces according to requirements (e.g. tables, chairs, couches, monitors, AV equipment, privacy screens, cubicles, doors, appliances, lighting, cabling, shelving, racks etc.). Not intended for large scale industrial/plant construction. Excludes Physical Security
			Physical Security	Enables managing the physical safety of property, facilities, equipment, and people through the presence of physical barriers, workforce authentication and authorization, and visible or unseen manned or unmanned security services.
			Operations, Maintenance, Repair & Imporvements	Enables preserving and improving productive assets through the planning, managing, and performance of preventative, routine, and critical maintenance work, and occasional improvements to those existing facilities or equipment.
			Fleet Management (non-logistics)	Enables managing vehicles used to support the transportation of the workforce and may include vehicle financing, maintenance, telematics, and scheduling. Vehicles may include cars, vans, trucks, motorized carts, bicycles, and other forms of transportation. Does not include transportation associated with the shipment of the organization's products or service delivery
			Food & Beverage	Enables providing and managing on-site food and beverage services for consumption by the organization's workforce.
	Corporate Communication	Enables management to orchestrate internal and external communications aimed at creating a favorable view among stakeholders including public relations, stakeholder relations, government relations, external relations, and community outreach.	Stakeholder Relations	Enables fostering external relationships with stakeholders of the entity, including investors, government and industry, the board of directors, and the general public. This is not related to customer management.
			Government Relations	Enables creating and maintaining relationships with government and industry representatives. Persuading public and government policy at the local, regional, national, and global level (subject to government regulations).
			External Communications	Enables developing and managing relations with media. Develop connections with journalists to solicit critical, third-party endorsements for a product, issue, service, or organization.
			Community Outreach	Enables developing and administering community relations. Establish business connections with the people constituting the environment the organization operates in and draws resources from to foster mutual understanding, trust, and support. Create programs that promote the organization's image in a positive and community-oriented way.

TECHNOLOGY BUSINESS MANAGEMENT SOLUTIONS DEFINITIONS
Technical Facing Solutions

Technical-Facing Solution types are how Enterprise IT supports the mission of the rest of the organization. They serve as the connective tissue, and focus on the underlying technologies, tools, and processes that make up IT services, or the "how" of IT.

Solutions Type	Solutions Category	Definitions
Delivery: build, deploy, support, and operate the Workplace solutions, Business solutions, and Shared & Corporate solutions. Development services create and change business-facing services, typically through projects. Additional support and operations services assist users and ensure the availability of the business-facing services.	**Strategy and Planning**	**Enable the CIO and IT leadership team to efficiently plan and manage the enterprise technology environment. Supported activities include planning, architecture, consulting, innovation and R&D, project and agile management, and vendor management. Many of the ITSM strategy services are included in this service category.**
	Development	**Plan, design, build, test and release new solutions.**
	Operations	**Monitor, support, manage, and run the enterprise technology systems for the enterprise. Typically provided behind the scenes and not directly user-facing.**
	Support	**Support the end user community with training, application support, service desk and central print services.**
	Security and Compliance	**Ensure the integrity, protection and proper use of the enterprises technology systems and data.**
Infrastructure: include the core infrastructure — facilities, compute, storage, and network services — that are required to deliver any technology automation. Typically, these are not directly consumed by users. However, for some IT operating models, a shared "infrastructure and operations group" may directly provide these Infrastructure Services to their customers.	**Compute**	**Provide the physical and virtual computing systems that run business applications, software tools and system services. Can be dedicated or on-demand and may be provided on-premises or through external managed services or public cloud offerings.**
	Data Center	**Provide a secure and controlled environment for housing compute, storage, network, and other technology equipment.**
	Network	**Provide the voice and data network and supporting services such as load balancing, domain services, virtual private network, and the internet to enable communications within and outside the enterprise.**
	Storage	**Persist information, data, files, and other object types ranging from real-time, high-performance data storage to long-term archive storage. Different offerings also provide recovery point objectives to meet the business needs of an application based on a business impact assessment.**
Platform: include the application infrastructure (database, middleware, etc.) that enables business-facing applications and services. Typically, these are not directly consumed by users. They are components required by the end user, business application and shared application services (see below for the latter two types). However, for some IT operating models, the	**Application**	**Provide a range of application-based services that run on top of the compute platform to enable specific business applications.**
	Data	**Provide a variety of data-related services that capture and retrieve transactional activities in a database, store the data in a centralized data warehouse, provide analytical and visualization tools to explore the data and caching technology to distribute information to the edge to improve performance and response times.**

PPBE 2025 IT Budget

Towers

Towers Table

Use this table to capture the investment costs aligned to the Technology Business Management (TBM) Towers and Sub-Towers. Definitions are provided in seperate tabs of this worksheet.

- Cost is entered by Sub-Towers.
- The total costs identified should equal the totals in the Budget Request Tab, Cost Pool Tab, and Solutions Tab.
- Investments will not likely have costs associated with all IT Towers and Sub-Towers.
- The version of the TBM Taxonomy is subject to change; the applicable version of TBM is identified in OMB Circular A-11.

Whole Dollars

Towers / IT Sub-Towers	PY - 2	PY - 1	PY	CY	BY	BY + 1	BY + 2	BY + 3	BY + 4
End User	0	0	0	0	0	0	0	0	0
Workspace									
Mobile Devices									
End User Software									
Network Printers									
Conferencing & AV									
IT Help Desk									
Deskside Support									
Output	0	0	0	0	0	0	0	0	0
Central Print									
Application	0	0	0	0	0	0	0	0	0
Application Development									
Application Support & Operation									
Business Software									
Platform	0	0	0	0	0	0	0	0	0
Database									
Middleware									
Mainframe Database									
Mainframe Middleware									
Data Center	0	0	0	0	0	0	0	0	0
Enterprise Data Center									
Other Facilities									
Compute	0	0	0	0	0	0	0	0	0
Servers (Windows / Linux)									
Unix									
Midrange									
Converged Infrastructure									
Mainframe									
High Performance Computing									
Storage	0	0	0	0	0	0	0	0	0
Online Storage									
Offline Storage									
Mainframe Online Storage									
Mainframe Offline Storage									
Delivery	0	0	0	0	0	0	0	0	0
IT Service Management									
Program, Product & Project Management									
Client Management									
Operations Center									
Security & Compliance	0	0	0	0	0	0	0	0	0
Security									
Compliance									
Disaster Recovery									
Network	0	0	0	0	0	0	0	0	0
LAN/WAN									
Voice									
Transport									
IT Management	0	0	0	0	0	0	0	0	0
IT Management & Strategic Planning									
Enterprise Architecture									
IT Finance									
IT Vendor Management									
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

IT Towers Definitions and Examples (TBM ver 4.0)
The version of the TMB Taxonomy is subject to change; the applicable version of TBM is identified in OMB Circular A-11.

	IT Tower	Sub-tower	Sub-tower Definition	Examples
1	End User	Workspace	Client compute physical desktops, portable laptops, thin client machines, peripherals (including monitors, pointer devices and attached personal printers) used by individuals to perform work.	EUS internal workspace/workstation, Standard Desktop, Virtual Desktop, Shared Workspace/workstation, Standard laptop, Ultraportable laptop, non-EUS laptop and desktop procurement
		Mobile Devices	Client compute tablets, smart phones (iOS, Android, Windows Mobile) and apps used by individuals to perform work.	NASA furnished phones, tablets, retiring of blackberry services
		End User Software	Client related software used to author, create, collaborate and share documents and other content. Examples include email, communications, messaging, word processing, spreadsheets, presentations, desktop publishing, graphics and others. Optional Level 3 categories include Productivity; Communications; Collaboration.	O365 Licenses, Cloud SaaS (Software as a Service), Drobox, Slack, Eventbrite, Tableau, Center-managed software, end user software (procurement and installation), remote desktop management tools
		Network Printers	Printers located on or near users' desktops. Examples include network connected personal printers, ink-jet printers, laser printers, departmental or copy-room printers. Only include network connected printers. Do not include printers connected to an end user computer.	Copy/Print/Fax/Scan capabilities (printers etc.)
		Conferencing and AV	Audio and video conferencing equipment typically used in conference rooms and dedicated telepresence rooms to enable workforce communications.	Desktop Video, Audio Conference, Live Event Broadcast, Telepresence, Video Conference Room
		IT Help Desk	Centralized Tier 1 help desk resources that handle user requests, answer questions and resolve issues.	Enterprise Service Desk, Help Desk, Service Desk Regular Business Hours, Service Desk After Hours (24/7), cost for IT helpdesk users
		Desk Side Support	Local support resources that provide on-site support for moves, adds, changes and hands on issue resolution.	EUS Standard Desk-side Support, Premium Desk-side Support, desk support cost per user
2	Output	Central Print	Central print services; often provided to support customer billing or customer documentation support processes. Unit of measure: page.	
3	Applications	Application Development	Resources involved with the analysis, design, development, code, test and release packaging services associated with application development projects. Application integration, monitoring, configuration management, interoperability, web services, and the use of APIs. Optional Level 3 categories include: Development, QA	AppDev, DevOps, Containerization, SDLC activities and standard 7120 dev projects
		Application Support and Operations	The operations, support, fix and minor enhancements associated with existing applications. Includes sustainment and operational maintenance.	Patching, security upgrades, infrastructure impacts
		Business Software	Software expenditures including licensing, maintenance and support related to off-the-shelf software purchases. Extension of SaaS and subscriptions to software services.	Survey Monkey
4	Platform	Database	Distributed database services focused on the physical database (versus the logical design) including DBAs, DBMS, tools and operational support.	Oracle, MySQL, MS SQL
		Middleware	Distributed platform, application and system integration resources enabling cross application development, communications and information sharing.	SharePoint, ServiceNow, SalesForce
		Mainframe Database	Mainframe database services focused on the physical database (versus the logical design) including the DBAs, DBMS, tools and operational support.	N/A to NASA
		Mainframe Middleware	Mainframe platform, application and system integration resources enabling cross application development, communications and information sharing.	N/A to NASA
5	Data Center	Enterprise Data Center	Purpose-built data center facilities that house and protect critical IT equipment including the space, power, environment controls, racks, cabling, and "smart hand" support. The only facilities that should be reported as Enterprise Data Centers are the 20 data centers that NASA reported to OMB. These are purpose-built data center facilities that house and protect critical IT equipment. Elements that should be included in reporting include (but not limited to) space, power, environment controls, racks, server, storage, local networking & cabling.	Facilities, power/cooling equipment (e.g. BMS, Generators, PDUs, CRAC, UPS, fire suppression, chillers, water pumps, etc.), refresh and O&M Cost (including labor)
		Other Facilities	Computer rooms and MDF/IDF/telco closets that house IT equipment in corporate headquarters, call centers, or other general-purpose office buildings. Purpose-built computing areas included in laboratories, test facilities and other key mission facilities. These computing areas hold IT equipment used for simulations, real-time data processing and any computing or storage requirements that include low latency, non-standard interfaces, information sensitivity or other mission specific needs that are not appropriate for general purpose data center facilities.	Facilities power/cooling equip (e.g. BMS, Generators, PDUs, CRAC, UPS, fire suppression, chillers, water pumps, etc.) refresh and O&M Cost including labor.
6	Compute	Servers	Physical and virtual servers running a version of an Operating System (OS) [Microsoft's Windows Server, Linux, or vendor-specific UNIX (AIX, Solaris, HPUX)]; includes hardware, software, labor and support services. Optional Level 3 categories include: Windows, Linux and Public Cloud Compute.	Wintel Service - Physical and Virtual, Linux Service - Physical and Virtual, Public Cloud Compute
		Unix	Servers running vendor-specific, proprietary Unix operating systems (e.g., IBM AIX, Sun Solaris, HP UX); includes hardware, software, labor and support services.	N/A to NASA
		Midrange	Servers running IBM AS/400 platform including hardware, software, labor and support services.	N/A to NASA
		Converged Infrastructure	Purpose-built appliances that provide compute, storage and network capabilities in one box.	HECC (formerly in 'Data Center - Other Facilities PPBE20')
		Mainframe	Traditional mainframe computers and operations running legacy operating systems.	N/A to NASA
		High Performance Computing [Also referred to as High	High-Performance Computing (HPC) is used for solving complex computational problems through massive concurrent use of computing resources and parallel processing techniques. HPC technology is applied in areas such as scientific and industrial research, product engineering and development, and complex business modeling, simulation and analysis. HPC hardware and software technologies are specialized and optimized for massively parallel computing and processing vast amounts of data. An optimized computing package that provides a software-defined IT infrastructure that virtualizes all of the elements of conventional "hardware-defined" systems. Includes typically, at a minimum, virtualized computing, a virtualized SAN and virtualized networking.	Virtualized computing, virtualized, SAN, and virtualized networking

7	Storage	Online Storage	Central storage such as SAN, NAS and similar technologies for the distributed compute infrastructure; includes the equipment, software and labor to run and operate. Optional Level 3 categories include: On-Premise, Public Cloud Storage.	(Platinum, Gold, Silver, Bronze) Storage, On-Premise, Public Cloud Storage
		Offline Storage	Offline storage resources used for archive, backup & recovery to support data loss, data corruption, disaster recovery and compliance requirements of the distributed storage.	(Platinum, Gold, Silver, Bronze) Storage
		Mainframe Online Storage	Mainframe attached storage arrays and the associated equipment, software and labor to run and operate.	N/A to NASA
		Mainframe Offline Storage	Any storage resources used for archive, backup, and recovery to support data loss, data corruption, disaster recover, and compliance requirements of the mainframe storage.	N/A to NASA
8	Delivery	IT Service Management	Resources involved with the incident, problem and change management activities as part of the IT Service Management process (excludes the Tier 1 help desk).	
		Program, Product & Project Management	Resources involved with managing and supporting IT related projects and/or continuous product development across business and IT-driven initiatives.	(e.g. Agile)
		Client Management	Resources or "account managers" aligned with the lines of business to understand business needs, communicate IT products, services and status of IT projects.	
		Operations Center	Centralized IT Operations Center resources including monitoring and intervention e.g., NOC (network operations center), GOC (global operations center).	
9	IT Security & Compliance	Security	IT Security resources setting policy, establishing process & means, measuring compliance and responding to security breaches and providing real-time operational security such as vulnerability scanning, managing firewalls, intrusion prevention systems, and security information and event management (SIEM). Optional Level 3 categories include: Cyber Security. The implementation actions defined by security policies (e.g., mitigating security breaches by applying patches) are not included in the Security sub-tower and are part of the respective towers where the actions take place (e.g., Compute, Storage, and Network).	Policies, procedures, establishing Center & Mission policies around cybersecurity control and data privacy
		Compliance	IT Compliance resources setting policy, establishing controls and measuring compliance to relevant legal and compliance requirements. Optional Level 3 categories include: Data Privacy. The implementation actions defined by Compliance policy (e.g., implementing controls like multi-factor authentication) are not included in the Compliance sub-tower and are part of the respective towers where the actions take place (e.g., Compute, Storage, Network, Application, End User).	Policies, procedures, establishing Center & Mission policies around cybersecurity control and data privacy
		Disaster Recovery	IT Disaster Recovery resources setting DR policy, establishing process & means, dedicated failover facilities, performing DR testing. NOTE: DR designated equipment is included directly in its own sub-tower (e.g., extra servers for DR are included in Compute tower, etc.). The implementation actions defined by Disaster Recovery policy (e.g., building DR servers) are not included in the Disaster & Recovery sub-tower and are part of the respective towers where the actions take place (e.g., Compute, Storage, Network).	Setting policy and establishing continuity of operations. Planning processes and testing plans (Does not include actual servers or equipment, policy and process only)
10	Network	LAN/WAN	Physical and wireless local area network connecting equipment within the core data centers and connecting end users in office working areas to the organization's broader networks. Wide area network equipment, labor and support services directly connecting data centers, offices and third parties (excludes telecom and communication services). Optional Level 3 categories include: LAN, WAN.	Corporate/Mission: WAN, LAN, Remote access (VPN), web content filtering, web application filtering, and operations support to DHS CDM. Mission managed network services, mission voice and data, Corporate Collaboration services (WebEx, Skype, voice conferencing (Instant Meeting and operator-assisted), Desktop videoconferencing (DMV), Video teleconferencing systems (ViTS), NASA Teleconferencing Center, Enterprise Video Content Delivery Network (IPTV)). Corporate Center cable plant, local cable video distribution, emergency notification systems, card-readers and cameras for physical security, and customer-unique services. VPN, Ethernet, Optical Wavelength Services, SONET, Private Line, Dark Fiber, IP services. Managed Network Services, web conferencing services, Unified
		Voice	Voice resources which enable or distribute voice services through on premise equipment including PBX, VoIP, voicemail and handsets (excludes telecom and communication services). Traditional Voice services, Circuit Switched Data Service, Toll Free.	Corporate VoIP and PBX. Corporate: Toll-free, calling cards, VoIP SIP/long distance local voice trunks, land mobile radio (LMR); Mission voice switches and maintenance
		Transport	Data network circuits and associated access facilities and services; includes dedicated and virtual data networks and internet access. Also includes usage associated with mobility and other data transit based on usage billing. Voice network circuits and associated access facilities and services. Also includes usage associated with standard telephone calls and 800 number service. Both voice and data transport may include terrestrial and non-terrestrial (e.g., satellite) technologies. Optional Level 3 categories include: Data, Voice.	Transition NASA services from GSA Networx/local network and telecommunications contracts to GSA EIS contracts. Support for fair opportunity solicitation, transition project, service ordering, non-recurring and parallel service costs during transition to EIS contractors. Transition services related to the migration from Networx/local network and telecommunications capabilities to EIS capabilities. Corporate Satellite services for NASA video distribution (e.g. mission, public affairs, and internal communications) (i.e. Encompass subcontract (MCDTV and NASA TV)) and Corporate disaster recovery. Satellite (mobile and fixed)
11	IT Management	IT Management & Strategic Planning	IT management and administration resources; typically, CIO, senior IT leaders and administrative support including centralized IT strategy and planning.	
		Enterprise Architecture	Enterprise architecture services including business, information, application and technical architecture to drive standardization, integration and efficiency among business technology solutions.	
		IT Finance	Resources involved in the planning, budgeting, spend management and chargeback of IT expenditures and the costing of IT products and services.	
		IT Vendor Management	Resources involved in the selection, contract management, oversight, performance management and general delivery of services by 3rd party vendors and external service providers.	

PPBE 2025 IT Budget
Cost Pool

Cost Pool Table

Use this table to capture the investment costs aligned to the Technology Business Management (TBM) Cost Pools and Sub-Cost Pools data. Definitions are provived in seperated tabs of this worksheet.

- Cost is entered by Sub-Cost Pools.
- The total costs identified should equal the totals in the Budget Request Tab, Towers Tab, and Solutions Tab.
- Investments will not likely have costs associated with all IT Cost Pools and Sub-Cost Pools.
- Costs associated with **Cloud** fall under the Outside Services Cost Pool and **Cloud Service Providers Sub-Cost Pool.** See Cloud Definitions Tab.
- The version of the TBM Taxonomy is subject to change; the applicable version of TBM is identified in OMB Circular A-11.

Whole Dollars

	Cost Pool/Sub Cost Pool	PY - 2	PY - 1	PY	CY	BY	BY + 1	BY + 2	BY + 3	BY + 4
1	**Internal Labor (FTE Labor Dollars)**	0	0	0	0	0	0	0	0	0
	Expense									
2	**External Labor (WYE)**	0	0	0	0	0	0	0	0	0
	Expense									
3	**Outside Services**	0	0	0	0	0	0	0	0	0
	Consulting									
	Managed Service Providers									
	Cloud Service Providers									
4	**Hardware**	0	0	0	0	0	0	0	0	0
	Expense									
	Lease									
	Maintenance & Support									
	Depreciation & Amortization									
5	**Software**	0	0	0	0	0	0	0	0	0
	Expense									
	Licensing									
	Maintenance & Support									
	Depreciation & Amortization									
6	**Facilities & Power**	0	0	0	0	0	0	0	0	0
	Expense									
	Lease									
	Maintenance & Support									
	Depreciation & Amortization									
7	**Telecom**	0	0	0	0	0	0	0	0	0
	Expense									
	Lease									
	Maintenance & Support									
	Depreciation & Amortization									
8	**Other**	0	0	0	0	0	0	0	0	0
	Other									
9	**Internal Services**	0	0	0	0	0	0	0	0	0
	Shared Service									
	Total	0	0	0	0	0	0	0	0	0

Check against Budget Request total	PY - 2	PY - 1	PY	CY	BY	BY + 1	BY + 2	BY + 3	BY + 4
Totals by year for tables in Budget Request, Solutions, Towers, and Cost Pool tabs should be equal. This line will be auto-populate with the totals on the Budget Request tab to facilitate an easy comparison of its totals, by year, with those on this tab.	0	0	0	0	0	0	0	0	0

IT Cost Pools Definitions and examples (TBM Ver 4.0)

The version of the TMB Taxonomy is subject to change; the applicable version of TBM is identified in OMB Circular A-11.

	IT Cost Pool	Sub-Cost Pool	Sub-Cost Pool Definition	Examples
1	Internal Labor	Expense	Internal Labor includes the full range of personnel costs and activities required for delivering or supporting the IT services – including direct operational activities, support and management and administration activities.	Employee wages, benefits, expenses, and occupancy. This represents government employees.
2	External Labor	Expense	External Labor includes the costs of external personnel required for delivering or supporting the IT services – including direct operational activities, support, management and administration activities	External contractor fees, travel, and expenses. This represents contractors when contractor labor is known and not just wrapped up into "Outside Services" contract costs.
3	Outside Services	Consulting	External consulting project-based services.	
		Managed Service Providers	External managed service providers.	
		Cloud Service Providers	External public cloud service providers, including IaaS, PaaS, and SaaS.	
4	Hardware	Expense	Hardware expense of non-capitalized purchases	(e.g., spare parts, consumables, or equipment below capitalization threshold).
		Lease	Hardware lease expenditures	(e.g., hardware purchased through a supplier or financial services leasing arrangement).
		Maintenance & Support	Hardware maintenance and support expenditures.	
		Depreciation & Amortization	Hardware depreciation of capitalized purchases.	
5	Software	Expense	Software expense of non-capitalized software purchases.	
		Subscription	Software license expenditures for the use of non-SaaS provided software. SaaS subscriptions belong under Outside Services > Cloud Service Providers.	
		Maintenance & Support	Software maintenance and support expenditures.	
		Depreciation & Amortization	Software depreciation of capitalized software license purchases and software development efforts.	
6	Facilities and Power	Expense	Data center space, power, security, and other operating expenses	(e.g., co-location facility services, electricity, water, etc.).
		Lease	Data center lease expenditures.	
		Maintenance & Support	Data center maintenance and support expenditures.	
		Depreciation & Amortization	Data center depreciation of facility build and leasehold improvements	(e.g., raised floor Investments, power/PDU infrastructure, and rack build-out).
7	Telecom	Expense	Voice and data network connectivity expenses, including circuit and usage expenditures.	
		Lease	Telecom lease expenditures.	
		Maintenance & Support	Telecom maintenance and support expenditures.	
		Depreciation & Amortization	Depreciation/amortization of any capitalized telecom expenditures; typically, this will show up under Hardware or Facilities depreciation/amortization.	
8	Other	Other	Miscellaneous or non-standard expenses.	This is a field provided by OMB. Report all undefined other costs in the Other sub-pool.
9	Internal Services	Shared Service	Miscellaneous charges received from other internal shared services groups (e.g., HR service fees from the HR department). Real estate management fees for space and power should be included in the Facilities and Power cost pool.	(e.g., HR service fees from the HR department). Real estate management fees for space and power should be included in the Facilities and Power cost pool.

Cloud Category explanation from "Frequently asked Questions"

Cloud Software as a Service (SaaS): The capability provided to the consumer is to use the provider's applications running on a cloud infrastructure. The applications are accessible from various client devices through a thin client interface such as a Web browser (e.g., Web-based email, Drop-box, Slack), or a program interface. The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, storage, or even individual application capabilities, with the possible exception of limited user-specific application configuration settings

Cloud Platform as a Service (PaaS): The capability provided to the consumer is to deploy onto the cloud infrastructure consumer-created or -acquired applications created using programming languages and tools supported by the provider. The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, or storage, but has control over the deployed applications and possibly application hosting environment configurations.

Cloud Infrastructure as a Service (IaaS):The capability provided to the consumer is to provision processing, storage, networks, and other fundamental computing resources where the consumer is able to deploy and run arbitrary software, which can include operating systems and applications. The consumer does not manage or control the underlying cloud infrastructure but has control over operating systems, storage, deployed applications; and possibly limited control of select networking components (e.g., host firewalls).