**AI Training | Example Prompt & Output Structures Likely to be Used in Your Position at Some Point**

**AI Terminology and Jargon**

**Foundational definitions for common terms you'll encounter when working with AI.**

**Artificial Intelligence (AI)**

**Artificial Intelligence** or **AI** is a broad area of computer science focused on creating machines that can perform tasks that typically require human intelligence. This includes things like learning from experience, understanding language, recognizing objects, solving problems, and making decisions. Think of it as the overall field, like "biology" or "physics."

* **Analogy:** If you think of a smart assistant like Siri or Alexa, the entire system that allows it to understand your voice and answer questions is a product of AI.

**Large Language Model (LLM)**

A **Large Language Model** or **LLM** is a specific type of AI that has been trained on a massive amount of text and code. Its primary job is to understand and generate human-like text. It learns patterns, grammar, context, and facts from the data it was trained on.

* **Analogy:** An LLM is like a super-powered autocomplete. While your phone's keyboard might suggest the next word, an LLM can suggest the next paragraph, write an entire essay, or even generate computer code based on your input.

**API (Application Programming Interface)**

An **API** is a set of rules and tools that allows different software applications to communicate with each other. It's the messenger that takes a request from you (or an application you're using), delivers it to the AI system, and then brings the AI's response back to you.

* **Analogy:** Think of a waiter at a restaurant. You (the user) don't go directly into the kitchen (the AI model) to prepare your food. Instead, you give your order (your request) to the waiter (the API). The waiter takes the order to the kitchen, and when the food (the AI's response) is ready, the waiter brings it back to your table.

**Prompt**

A **prompt** is the instruction, question, or any input you provide to an AI to get it to perform a task. It's what you type into the chat box. A prompt can be simple, like "What is the capital of France?", or very complex, involving detailed instructions and examples.

* **Example:** "Write a short, professional email to my team announcing a meeting on Tuesday at 10 AM to discuss quarterly goals." This entire sentence is the prompt.

**Prompting**

**Prompting** is the skill and practice of designing effective prompts. Since the quality of the AI's output depends heavily on the quality of the input, "prompting" (also called "prompt engineering") is the art of crafting clear, specific, and well-structured instructions to guide the AI toward the desired result.

* **Analogy:** It's the difference between asking a photographer to "take a picture" versus asking them to "take a professional headshot with a blurred background, using warm, natural light to create a friendly and approachable feel." The second instruction is much more likely to get you the result you want.

**AI "Hallucinating"**

An **AI hallucination** is when an AI model generates information that is incorrect, nonsensical, or completely fabricated, but presents it as if it were a fact. The AI isn't lying or being deceptive; it's essentially filling in gaps in its knowledge by generating plausible-sounding but untrue information. This is a critical limitation to be aware of.

* **Analogy:** It's like someone confidently telling you a detailed story about a historical event they were never a part of, mixing up facts they know with details they've invented along the way to make the story complete. They aren't trying to trick you; their brain is just "making it up" as it goes.

**Chain-Prompting (or Multi-layer Prompting)**

**Chain-prompting** is an advanced technique where you break down a complex task into a series of smaller, sequential prompts. The output from one prompt becomes the input or context for the next one. This allows you to guide the AI through a multi-step process, refine results, and achieve more complex outcomes than you could with a single prompt.

* **Example Workflow:**
  1. **Prompt 1:** "Generate 10 potential names for a new brand of eco-friendly coffee."
  2. **Prompt 2:** (After the AI gives you 10 names) "I like name #7. Now, create three short marketing slogans for a coffee brand named 'EarthBrew'."
  3. **Prompt 3:** "Using the second slogan, write a 150-word social media post announcing the launch of EarthBrew coffee."

**Advanced Technique: Chain-Prompting with Images**

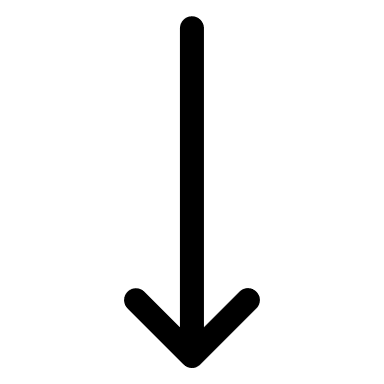
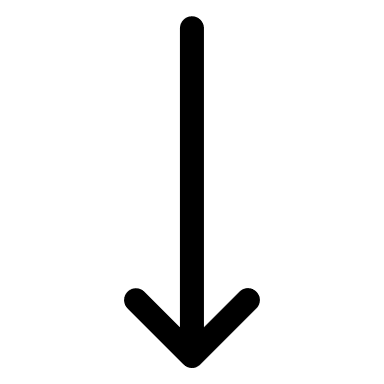
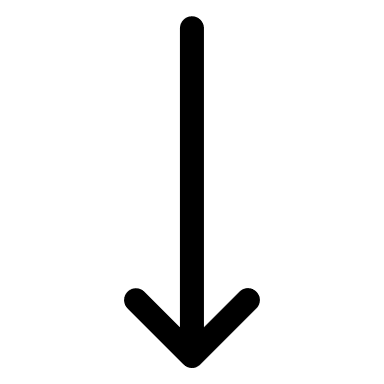
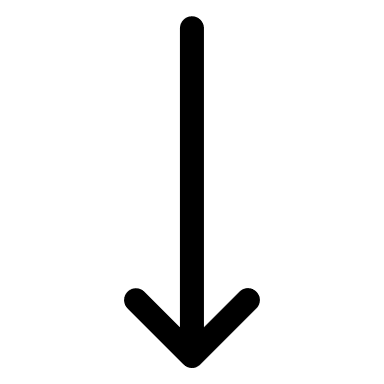
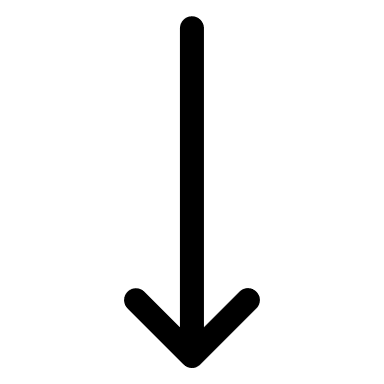
Sometimes, you need an AI to perform a very complex analysis of a single image. Asking it to do everything at once can lead to vague or incomplete results. **Chain-prompting** solves this by breaking the big task into a series of smaller, focused prompts.

Think of it like being a director guiding a detective. Instead of just saying "analyze the crime scene," you'd tell them, "First, describe the room. Next, examine the desk for clues. Then, check the window." Each step builds on the last, leading to a much more thorough investigation.

Let's walk through an example using a photo of a house.

**Overall Goal:** To get a comprehensive report on a property's exterior condition and features from a single photo.

**Now, let’s take this step-by-step**

****

**Step 1: The Initial Broad Analysis**

You start with a general prompt to get an overview of the entire scene. This sets the stage for the more detailed analysis to follow.

* **Prompt 1:** "Analyze this image and provide a general description of what you see."
* **Expected AI Output:** "This is a photo of a two-story, single-family home with a gabled roof and an attached garage. There is a large deciduous tree in the front yard, along with landscaped flowerbeds near the foundation. The house appears to be in a suburban neighborhood."

This first output confirms the AI understands the basic scene. Now, you can "zoom in" on specific details.

**Step 2: The Chain of Detailed Prompts**

You now "chain" your prompts, using the initial context to ask specific questions about individual elements.

* **Prompt 2 (The Roof):** "Look closely at the **roof** of the house. What type of material is it made of (e.g., asphalt shingles, clay tile, metal)? What is the architectural style, and what can you infer about its condition?"
* **Prompt 3 (The Tree):** "Now, focus on the large **tree** in the yard. Based on its leaves and bark, can you identify the species? Does it appear healthy, and is it leaning in a way that could be a potential hazard to the house?"
* **Prompt 4 (The Flowerbeds):** "Examine the **flowerbeds**. Are they covered in mulch or rock? What types of plants or shrubs do you see, and do they look well-maintained or overgrown?"
* **Prompt 5 (The Windows):** "Analyze the **windows**. Based on their style and frames, do they appear to be original to the home's likely architectural period, or do they look like modern replacements?"

**Step 3: The Final Synthesis**

This is the final and most powerful step in the chain. You ask the AI to combine all of its previous, separate analyses into one cohesive summary.

* **Final Prompt:** "Now, using all the specific details you've provided about the roof, the tree, the flowerbeds, and the windows, generate a **consolidated property condition summary**. Structure it as a report with sections for 'Roofing,' 'Landscaping,' and 'Windows'."

**Why This Method is So Effective**

* **Depth and Detail:** It forces the AI to look closer at individual elements it might have ignored in a general analysis.
* **Higher Accuracy:** By focusing on one task at a time (e.g., just the roof), the AI is less likely to get confused or "hallucinate" details.
* **User Control:** You guide the entire process. If the AI makes a mistake on one step, you can correct it before moving on, ensuring the final report is built on accurate information.
* **Complex Output:** It enables you to build a sophisticated, structured document that would be nearly impossible to get from a single, simple prompt.

**How can this example be used in our industry?**

**Technicians often take pics of various visible issues on the ship for which they require further assistance. With the AI having learned the technical documentation and diagrams, it will know more about what to describe. In fact, in might just know precisely what you NEED to know. All depends on its knowledge base provided.**

**AI Training Data**

**Training Data** is the collection of information (text, images, code, etc.) that is fed to a machine learning algorithm to create a model. The quality and quantity of the training data are the most important factors in determining how capable and accurate the final AI model will be.

* **Analogy:** This is the library of books, articles, and websites a student studies to learn about a subject. A student who only reads one book will know far less than a student who has read thousands.

**Inference**

**Inference** is the process of using a trained AI model to make a prediction or generate new output based on new input. When you give a prompt to an LLM and it gives you a response, the model is performing inference. It's the "live" operational use of the model after it has been trained.

* **Analogy:** Training is studying for the test. Inference is actually taking the test and answering the questions.

### **Machine Learning (ML)**

**Machine Learning** is a core subfield of AI that focuses on building systems that can **learn from and make decisions based on data**. Instead of being explicitly programmed for a task, an ML model is "trained" on a large dataset, from which it learns patterns. The more data it sees, the better it gets at its task.

* **Analogy:** You don't teach a child to recognize a cat by describing it ("it has fur, four legs, and a tail"). Instead, you show them many pictures of different cats. Eventually, their brain learns the underlying pattern of "cat-ness" on its own. Machine Learning works the same way.
* **Relationship:** If AI is the entire field, Machine Learning is the most significant and powerful engine within it. Most modern AI is a form of Machine Learning.

**Bot**

A **bot** (short for "robot") is the most general term for any software program that performs automated, repetitive tasks. Bots are programmed to operate on their own without the need for constant human intervention. They can be very simple or very complex.

* **Analogy:** Think of a bot as a sprinkler system on a timer. You set it up once (program it), and it automatically turns on and waters the lawn every day (performs its task) without you having to do anything further. It's a simple, automated task-doer.

**Chatbot**

A **chatbot** is a specific type of bot designed to simulate human conversation through text or voice. Its primary purpose is to communicate with users. Early chatbots followed very simple, rule-based scripts. Modern chatbots, powered by AI and LLMs, can understand context and have much more natural, free-flowing conversations.

* **Analogy:** If a bot is a sprinkler system, a chatbot is an automated phone menu ("Press 1 for sales, Press 2 for support"). A simple one has limited responses. An AI-powered one is like having a conversation with a customer service representative who can understand your questions and provide detailed answers.

**Virtual Assistant**

A **virtual assistant** is a more advanced and capable type of chatbot. While a chatbot's main function is conversation, a virtual assistant integrates with other applications and can perform tasks for the user. Think of Siri, Alexa, or Google Assistant. They don't just talk to you; they can set alarms, play music, check your calendar, and control smart home devices.

* **Analogy:** A chatbot is a librarian who can help you find a book by talking to you. A virtual assistant is a personal concierge who not only talks to you but can also book your dinner reservations, schedule your transportation, and add appointments to your calendar. It performs actions in the real or digital world on your behalf.

**AI Agent (or Autonomous Agent)**

An **AI agent** is the most advanced and autonomous concept in this list. An agent is an AI system that can perceive its environment, make decisions, and take actions to achieve a specific goal. Unlike a virtual assistant that waits for a direct command, an AI agent can be given a high-level objective and will then independently create and execute a multi-step plan to achieve it.

* **Analogy:**
  + You tell a **virtual assistant**: "Book me a flight to New York on Tuesday." (A direct command).
  + You tell an **AI agent**: "Plan my business trip to New York next week." The agent would then, on its own:
    1. Check your calendar for your availability.
    2. Search for the best-priced flights.
    3. Find a hotel near your meeting location.
    4. Book the flight and hotel.
    5. Add all the confirmation details to your calendar.
    6. Send you a complete itinerary.

The agent takes a complex goal and breaks it down into a series of tasks that it executes autonomously.

**AI Model (or "The Model")**

This is the most accurate term for the core component of an AI system. A **model** is a specific, trained version of an algorithm that has learned from a dataset to perform a task, like generating text or identifying images. When you hear about "GPT-4" or "Gemini," you're hearing the names of specific, powerful AI models.

* **Analogy:** Think of a student. The student's brain is the hardware, but their specific knowledge of a subject, like algebra, is the "model." You could have another student with a different "model" for geometry.

**AI Engine**

This is a more informal, slang term that is often used to mean the same thing as **AI Model**. People use "engine" to evoke the idea of a powerful, core component that drives the AI's capabilities, much like a car engine provides power. While technically less precise than "model," its meaning is generally understood.

* **Usage:** You might hear a CEO on the news say, "We're using a powerful new AI engine to drive our customer service," when they really mean they've implemented a new AI model.

**Algorithm**

An **algorithm** is a set of rules or step-by-step instructions that a computer follows to accomplish a task. In AI, the algorithm is the foundational recipe that tells the system *how* to learn from data. The learning process then creates the "model."

* **Analogy:** An algorithm is like a recipe for baking a cake. It tells you the steps: mix flour and sugar, add eggs, etc. The final baked cake is the "model"—the result of following those instructions with specific ingredients (data).

**Neural Network**

A **Neural Network** is a specific type of AI architecture inspired by the structure of the human brain. It's made of interconnected "neurons" or nodes organized in layers. As data passes through these layers, the network learns to recognize patterns. Large Language Models (LLMs) are a very advanced type of neural network.

* **Analogy:** Imagine a line of people passing a message. The first person hears the message (the input), interprets it, and whispers it to the next person. Each person in the line is a "neuron," and the entire line is the "network." By the end, the message has been processed.

**Command Line Interface (CLI)**

A **Command Line Interface** or **CLI** is a text-based way to interact with a computer or software. Instead of clicking on icons and buttons (a Graphical User Interface, or GUI), the user types commands directly into a terminal or command prompt. This is a common tool for developers and technical users to interact with AI models in a more powerful, direct way.

* **Usage:** When you see a developer in a movie typing code into a black screen with flashing text, they are likely using a CLI.

**AI Prompting for Business Operations: A Training Guide**

Here are four lessons covering common business scenarios. Each lesson explains the prompting strategy and provides real-world examples of prompt structure and expected AI output.

**Lesson 1: Prompting for Event Agendas**

**NOTE: Think about our annual PSR while reading/practicing the following lessons.**

Creating a detailed event agenda is a time-consuming task. AI can draft a comprehensive schedule in seconds, but it needs the right inputs, especially when you're faced with unexpected constraints.

**Scenario A: The Fully-Staffed Annual Conference**

**The Goal:** Create a logical and engaging agenda for a 2-day annual conference.

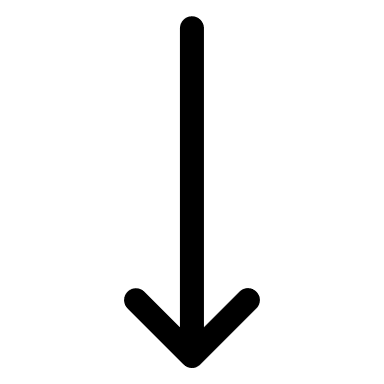
**Information the AI Needs:** To create a good agenda, you must provide the core logistics. The AI can't guess these details.

* **Event Duration:** 2 days
* **Daily Hours:** 9:00 AM to 5:00 PM
* **Presentations:** List of topics, the presenter for each, and their requested time (e.g., Keynote - 60 min, Program Update - 45 min).
* **Meal & Break Times:** Specify when and for how long (e.g., 1-hour lunch, two 15-minute coffee breaks).
* **Objective:** The overall goal (e.g., team building, sales training, project kick-off).

**Prompt Structure and Example:**

**A good prompt for an accurate output of this nature is structured like a brief, with clear headings for each piece of information.**

**Full Prompt Below: Take a look.**

****

**AI Role Assignment:** You are a 30-year corporate executive with a Doctorate in Organizational Leadership with an extensive history in planning and hosting multi-day events.

**Task:** Create a detailed agenda for our 2-day annual sales conference.

**Objective:** To celebrate last year's wins, align on this year's strategy, and provide new product training.

**Event Logistics:**

**Duration:** 2 days (October 26th and 27th)

**Daily Schedule:** 9:00 AM - 5:00 PM

**Breaks:** Include a 1-hour lunch break around noon and two 15-minute coffee breaks (mid-morning and mid-afternoon) each day.

**Presentations & Activities:**

* "Welcome & Year-in-Review" (CEO, Jane Doe) - 45 minutes
* "Deep Dive into Q1/Q2 Sales Data" (Head of Sales, John Smith) - 60 minutes
* "Introducing the 'Catalyst' Product Line" (Product Lead, Emily Jones) - 90 minutes
* "Interactive Training on 'Catalyst'" (Product Team) - 120 minutes
* "Competitive Landscape Analysis" (Market Analyst, Raj Patel) - 45 minutes
* "Fireside Chat with Top Performers" (Moderated by John Smith) - 60 minutes
* "Goal Setting & Q4 Strategy" (CEO & Head of Sales) - 60 minutes
* "Closing Remarks & Awards" (CEO) - 30 minutes

**Instruction:** Arrange these sessions logically across the two days. Place the welcome and review on Day 1. The product training should happen after the product introduction. End Day 2 with the closing remarks. Fill in the schedule with the breaks.

**Expected Output Below:**

Note: If you use Chat GPT 4 or later, just end the prompt with an instruction to post a downloadable file (.docx, .xlsx, .csv, .pdf, etc.) with the final agenda. I recommend .csv from experience.

| **Day 1: October 26th** |  |  |
| --- | --- | --- |
| **Time** | **Session** | **Presenter(s)** |
| 9:00 AM - 9:15 AM | Welcome & Coffee |  |
| 9:15 AM - 10:00 AM | Welcome & Year-in-Review | Jane Doe, CEO |
| 10:00 AM - 11:00 AM | Deep Dive into Q1/Q2 Sales Data | John Smith |
| 11:00 AM - 11:15 AM | Coffee Break |  |
| 11:15 AM - 12:00 PM | Competitive Landscape Analysis | Raj Patel |
| 12:00 PM - 1:00 PM | Lunch Break |  |
| 1:00 PM - 2:30 PM | Introducing the 'Catalyst' Product Line | Emily Jones |
| 2:30 PM - 4:30 PM | Interactive Training on 'Catalyst' | Product Team |
| 4:30 PM - 4:45 PM | Day 1 Wrap-up | John Smith |
| **Day 2: October 27th** |  |  |
| **Time** | **Session** | **Presenter(s)** |
| 9:00 AM - 9:15 AM | Morning Coffee & Networking |  |
| 9:15 AM - 10:15 AM | Fireside Chat with Top Performers | John Smith |
| 10:15 AM - 10:30 AM | Coffee Break |  |
| 10:30 AM - 11:30 AM | Goal Setting & Q4 Strategy | Jane Doe & John Smith |
| 11:30 AM - 12:00 PM | Closing Remarks & Awards | Jane Doe |
| 12:00 PM | Conference Concludes |  |

**Scenario B: The Same Event with a 2/3 Staff Cut**

**The Challenge:** You have to run the same event with a skeleton crew. You can't have staff managing every session and break. The AI must now act as a strategic optimizer.

**Prompt Structure and Example:**

The prompt is similar but adds a crucial **Constraint** section and changes the instruction.

**Task:** Revise a 2-day conference agenda to work with minimal staff.

Objective: Same as before.

Logistics: Same as before.

Presentations & Activities: Same list as before.

CRITICAL CONSTRAINT: We have a skeleton crew. The agenda must be optimized to reduce the need for active staff management. This means:

1. Combine related sessions where possible to minimize transition times.

2. Suggest which sessions could be pre-recorded and played on a screen to free up presenters and staff.

3. Strategically place longer, self-managed breaks to allow staff to prepare for the next major session block.

Instruction: Re-create the agenda with the above constraints. Add a "Notes" column explaining why you made each change. The goal is maximum impact with minimum active oversight.

**Expected Output (Word table format unless you instruct a different file type):**

**Day 1: October 26th**

|  |  |  |  |
| --- | --- | --- | --- |
| **Time** | **Session** | **Presenter(s)** | **Notes** |
| 9:00 AM - 9:30 AM | Welcome Breakfast (Self-Serve) |  | Extended arrival window reduces need for a staffed welcome desk. |
| 9:30 AM - 11:00 AM | **Combined Session:** Wins, Data & Landscape | Jane Doe, John Smith, Raj Patel | Consolidates three talks into one "State of the Business" block. Fewer transitions. |
| 11:00 AM - 11:15 AM | Coffee Break |  |  |
| 11:15 AM - 12:00 PM | **Pre-recorded Session:** Introducing 'Catalyst' | Emily Jones (on screen) | Frees up the entire product team during the session. Can be started with a single click. |
| 12:00 PM - 1:30 PM | Extended Lunch Break |  | Longer break gives the skeleton crew ample time to set up the complex afternoon workshop. |
| 1:30 PM - 3:30 PM | Interactive Training on 'Catalyst' | Product Team | This hands-on session remains live as it's high-value. |
| 3:30 PM | Day 1 Concludes |  |  |
| **Day 1: October 27th** | | | |
| **Time** | **Session** | **Presenter(s)** | **Notes** |
| 9:00 AM - 9:30 AM | Morning Coffee & Networking |  |  |
| 9:30 AM - 11:00 AM | **Combined Session:** Strategy & Top Performers | Jane Doe & John Smith | Merges the fireside chat and strategy session into a single forward-looking block. |
| 11:00 AM - 11:30 AM | Closing Remarks, Awards & Wrap-up | Jane Doe |  |
| 11:30 AM | Conference Concludes |  | Ends the event early to reduce the total hours requiring staff coverage. |

**Lesson 2: Prompting for Strictly Formatted Documents**

Many organizations require reports, proposals, or analyses to be in a single, authorized format. You can teach an AI to be your expert formatter.

**The Goal:** Prepare a comprehensive "Project Close-Out Report" that must follow a rigid template. The information needed is scattered across different internal documents.

**Information the AI Needs:**

1. **The Template:** You must provide the AI with the exact structure of the document.
2. **The Content Sources:** Give the AI the raw material. This can be text you paste or, more powerfully, URLs to the documents (assuming the AI has access).

**Prompt Structure and Example:**

**Task**: Generate a Project Close-Out Report for the "Alpha Launch" project.

**CRITICAL INSTRUCTION**: The output MUST strictly follow the template provided below. Do not add, remove, or reorder any sections. Synthesize the required information from the content sources linked below.

Document Template:

---

Project Close-Out Report

1.0 Executive Summary:

Project Name:

Project Manager:

Completion Date:

Brief Summary of Outcome: (A 2-3 sentence summary of whether the project was successful and met its goals).

2.0 Performance Analysis:

2.1 Original Goals: (List the initial goals).

2.2 Final Outcomes: (List the final results and state whether goals were met, missed, or exceeded).

2.3 Budget Analysis: (Compare planned budget vs. actual spend).

3.0 Lessons Learned:

3.1 What Went Well:

3.2 What Could Be Improved:

3.3 Recommendations for Future Projects:

Content Sources:

Project Charter & Goals: [internal-wiki.com/alpha-launch/charter]

Final Budget Report: [sharepoint.com/finance/alpha-project/final\_budget.xlsx]

Team Retrospective Notes (Lessons Learned): [confluence.com/alpha-team/retro-notes]

Action: Populate the template above using the information found in the links.

**Expected Output (Formatted Document):**

**Project Close-Out Report**

**1.0 Executive Summary:**

* **Project Name:** Alpha Launch
* **Project Manager:** David Chen
* **Completion Date:** August 1, 2025
* **Brief Summary of Outcome:** The Alpha Launch project was successfully completed, meeting all primary objectives for user engagement within the initial 30-day period. The project was delivered 5% under budget, though it experienced a two-week timeline delay due to external vendor issues.

**2.0 Performance Analysis:**

* **2.1 Original Goals:**
  + Achieve 10,000 new user sign-ups in the first month.
  + Maintain an app store rating of 4.5 stars or higher.
  + Keep project spend under the allocated $50,000 budget.
* **2.2 Final Outcomes:**
  + **Met:** Achieved 11,520 new user sign-ups.
  + **Met:** Maintained an average app store rating of 4.7 stars.
  + **Met:** Final project spend was $47,500.
* **2.3 Budget Analysis:** The project came in $2,500 (5%) under the planned budget of $50,000, primarily due to efficiencies in marketing spend.

**3.0 Lessons Learned:**

* **3.1 What Went Well:** The agile development process allowed the team to pivot quickly. The marketing campaign exceeded all key performance indicators.
* **3.2 What Could Be Improved:** Over-reliance on a single vendor for a critical component created a bottleneck that delayed the timeline.
* **3.3 Recommendations for Future Projects:** Implement a multi-vendor strategy for all critical path components to mitigate risk.

**Lesson 3 & 4: Prompting for Spreadsheet Output**

NOTE: AI can be a powerful data entry and analysis assistant, populating spreadsheets from unstructured information and even adding formulas.

**Scenario A: Creating a Basic Spreadsheet (Content Calendar)**

**The Goal:** Create a structured content calendar for one week.

**Prompt Structure and Example:**

The key is to define the columns explicitly.

**Task:** Generate a social media content calendar for next week (August 11-15) in a spreadsheet format.

**Instructions:**

Create a table with the following columns:

1. Day

2. Platform (The platform to post on: LinkedIn or Twitter)

3. Post Topic (A brief description of the content)

4. Draft Post (A 1-2 sentence draft of the post text)

5. Hashtags (3-4 relevant, high performing hashtags)

**Content Theme:** Focus on the benefits of our new "Project Alpha" software for small businesses. Alternate posts between LinkedIn and Twitter.

**Expected Output (Spreadsheet Data):**

| **Day** | **Platform** | **Post Topic** | **Draft Post** | **Hashtags** |
| --- | --- | --- | --- | --- |
| Mon, Aug 11 | LinkedIn | Saving Time with Automation | Is your team spending too much time on manual tasks? Project Alpha automates your workflow so you can focus on what matters. | #SmallBusiness #Productivity #Automation #SaaS |
| Tue, Aug 12 | Twitter | Quick Tip Tuesday | Tip: Use Project Alpha's dashboard to see your team's progress at a glance. #ProjectManagement #Efficiency | #ProjectAlpha #BizTip #Dashboard |
| Wed, Aug 13 | LinkedIn | Customer Success Story | See how "Innovate Inc." cut their project costs by 20% using Project Alpha. Read their story here. | #CaseStudy #SuccessStory #ROI #BusinessGrowth |
| Thu, Aug 14 | Twitter | Did you know? | Did you know Project Alpha integrates with all your favorite tools? Seamless workflow is just a click away. | #Integration #Tech #Workflow #ProjectAlpha |
| Fri, Aug 15 | LinkedIn | Weekly Feature Spotlight | This week's spotlight is on our collaborative timeline feature. Plan, track, and deliver projects faster, together. | #Collaboration #Teamwork #ProjectPlanning #FeatureFriday |

**Scenario B: Spreadsheet with Data Parsing and Formulas**

**The Goal:** Automatically track expenses by having the AI read emailed receipts, parse the key data, and calculate the total.

**Prompt Structure and Example:**

**NOTE:** This is a more advanced prompt. You must provide examples for the AI to learn from.

**Task:** Act as an expense tracking assistant. I will provide a series of email receipts. Your job is to extract the key information and organize it into a spreadsheet. Finally, calculate the total expense.

**Instructions:**

1. Parse each email receipt below to find the following data points: Vendor, Date, Total Amount.

2. Create a table with the columns: "Vendor", "Date", "Category", "Amount".

3. Use your best judgment to assign a Category from this list: [Software, Office Supplies, Marketing, Travel].

4. After listing all items, add a final row to calculate the Total Expenses using a SUM formula.

**Email Receipts to Parse:**

**NOTE:** It does not matter how long the email thread is. The AI will parse out the desired info regardless.

---

Email 1:

From: orders@office-supplies-superstore.com

Subject: Your receipt for order #84521

Thank you for your purchase on Aug 6, 2025. Your credit card has been charged $112.50. Your new printer and paper will arrive soon!

---

Email 2:

From: accounts@flyaway-airlines.com

Subject: Your flight confirmation to New York

This email confirms your booking for a flight on 8/7/2025. Total charge: $458.22. Thank you for flying with us.

---

Email 3:

From: billing@designpro-software.com

Subject: Your annual subscription renewal

Your subscription to DesignPro has been renewed for one year as of August 8, 2025. The total amount billed was $299.00.

---

Action: Generate the spreadsheet now.

**Expected Output (Spreadsheet with Formulas):**

| **Vendor** | **Date** | **Category** | **Amount** |
| --- | --- | --- | --- |
| Office Supplies Superstore | Aug 6, 2025 | Office Supplies | $112.50 |
| FlyAway Airlines | Aug 7, 2025 | Travel | $458.22 |
| DesignPro Software | Aug 8, 2025 | Software | $299.00 |
|  |  | **Total Expenses:** | **=SUM(D2:D4)** |
|  |  |  | **$869.72** |

**Lesson 5: Prompting for PowerPoint Presentations**

**NOTE**: Some AI can't directly create a .PPT file, but it can generate a slide-by-slide script, including titles, bullet points, and speaker notes, which you can then copy and paste into your presentation software. The key is to provide a clear structure and all the necessary data.

**Scenario: The Quarterly Business Review (QBR)**

**The Goal:** You need to create a comprehensive QBR presentation for senior leadership. The data is spread across sales reports, marketing dashboards, and project management updates.

**Information the AI Needs:**

1. **Audience and Tone:** Who is this for and how should it sound? (e.g., "For the CEO and VPs," "Tone should be data-driven and confident").
2. **The Core Data:** The raw numbers, facts, and updates.
3. **A Clear Outline:** A slide-by-slide structure is essential for a good presentation.

**Prompt Structure and Example:**

Task: Generate the content for a Quarterly Business Review (QBR) presentation for Q3.

**Audience:** Senior Leadership (CEO, VPs).

**Tone:** Professional, data-driven, and confident.

**Core Data for Q3:**

**Sales:** Total revenue of $2.5M vs. a target of $2.2M (14% over target). Top-performing region was North America with $1.2M. Key win: Signed "Global Corp" for a $500k deal.

**Marketing:** Generated 1,500 new leads (goal was 1,200). The "Summer Savings" campaign had a 15% conversion rate.

**Product:** The "Alpha Project" successfully launched on schedule. User adoption is at 25% after the first month.

**Financials:** Overall budget spend was $1.8M against a planned $1.9M (under budget).

**Q4 Priorities:** Launch "Project Beta," expand into the European market, hire 5 new sales reps.

**Presentation Outline & Instructions:**

Create the content for the following 10-slide presentation. For each slide, provide a Title, concise Bullet Points, and a suggestion for a Visual Aid.

* Slide 1: Title Slide: Title, "Q3 2025 Business Review," and presenter name.
* Slide 2: Executive Summary: A high-level summary of the quarter's biggest achievements.
* Slide 3: Q3 Sales Performance: Show revenue vs. target.
* Slide 4: Sales Deep Dive: Highlight the top region and the key "Global Corp" win.
* Slide 5: Marketing & Lead Generation: Show leads generated vs. goal and mention the successful campaign.
* Slide 6: Product Development Milestones: Announce the successful launch of "Project Alpha."
* Slide 7: Financial Health: Show budget vs. actual spend.
* Slide 8: Q3 Overall Scorecard: A simple summary table showing if each department (Sales, Marketing, Product) hit their goals.
* Slide 9: Looking Ahead: Q4 Priorities: List the key priorities for next quarter.
* Slide 10: Q&A: A simple closing slide.

**Expected Output (Presentation Script):**

**Slide 1: Title Slide**

* **Title:** Q3 2025 Business Review
* **Subtitle:** Presented by [Your Name]
* **Visual Aid:** Company Logo

**Slide 2: Executive Summary**

* **Title:** Q3 2025: A Quarter of Significant Growth
* **Bullet Points:**
  + Exceeded revenue targets by 14%, driven by strong performance in North America.
  + Successfully launched our flagship "Project Alpha" on schedule.
  + Marketing efforts generated 25% more leads than projected.
  + Maintained fiscal discipline, coming in under budget for the quarter.
* **Visual Aid:** Four clean icons representing Sales, Product, Marketing, and Finance, each with a green checkmark.

**Slide 3: Q3 Sales Performance**

* **Title:** Revenue Surpassed Ambitious Targets
* **Bullet Points:**
  + Achieved **$2.5M** in total revenue.
  + Outperformed our **$2.2M** target by **$300k**.
* **Visual Aid:** A bar chart comparing "Target Revenue" and "Actual Revenue."

*(...and so on for all 10 slides, providing a complete script to copy into PowerPoint.)*

**Lesson 6: Prompting for HTML Code to Create Useful Tools**

\*\*\*\*\*COMING SOON AS A SEPARATE DOCUMENT WITH SEVERAL TOOLS FOR USE IN YOUR JOB\*\*\*\*\*\*

**Lesson 7: Intelligent Email Processing for Expense Tracking**

This lesson teaches you how to turn your AI into a smart financial assistant that can automate the tedious process of tracking expenses from your inbox.

**The Goal:** To create a system where you can provide the AI with a batch of emails, and it will automatically identify receipts and invoices, ignore irrelevant messages, and organize the key financial data into a structured table.

**Part 1: The Master Prompt Template**

A powerful prompt is like a clear job description for your AI. It needs a role, a clear task, rules to follow, and the data to work with. Here is a template your students can adapt.

**Your Role:** You are an expert financial assistant. Your primary function is to process emails, identify expenses, and organize them for accounting purposes. You are meticulous, accurate, and follow instructions perfectly.

**Your Task:**

I will provide you with a batch of emails below. You must read and analyze each one to determine if it is a receipt or an invoice for a purchased product or service.

1. If an email IS a receipt or invoice, you will extract the following information and add it as a new row to a table.

2. If an email IS NOT a receipt or invoice (e.g., a meeting request, newsletter, or general correspondence), you will completely ignore it. Do not mention it in your output.

**Output Format:**

Create a table with exactly four columns. The rows of the table will represent the vendor or service provider.

Column 1: Product/Service: The name of the item or service purchased.

Column 2: Cost: The base price of the purchase before any taxes or fees.

Column 3: Tax: The amount of tax applied. If no tax is mentioned, enter "N/A".

Column 4: Other Fees: Any additional fees mentioned (e.g., service fee, delivery charge, convenience fee). If none, enter "N/A".

Data to Process:

[PASTE THE BATCH OF EMAILS HERE]

Final Instruction: After processing all the emails, present only the final, populated table.

**Part 2: The Input Data (Mock Emails)**

Here are 10 mock business emails. We will paste these into the [PASTE THE BATCH OF EMAILS HERE] section of our prompt.

**Email 1 (Receipt)**

* **From:** accounts@adobe.com
* **Subject:** Your Adobe Creative Cloud receipt
* **Body:** Thank you for your payment. Your Creative Cloud All Apps subscription has been renewed for another year.
  + **Charge Details:**
  + Creative Cloud Annual Plan: $599.88
  + Total: $599.88

**Email 2 (Irrelevant)**

* **From:** Sarah Jenkins [s.jenkins@clientcorp.com](mailto:s.jenkins@clientcorp.com)
* **Subject:** Project Phoenix - Weekly Sync
* **Body:** Hi team, please confirm your availability for our weekly sync meeting this Thursday at 11 AM to discuss project milestones.

**Email 3 (Invoice)**

* **From:** billing@jetstream-internet.com
* **Subject:** Your Monthly Invoice #JS-83341 is Ready
* **Body:** Your bill for high-speed internet service is now available.
  + Internet Service (1 Gig): $79.99
  + Equipment Rental Fee: $10.00
  + Regulatory Fee: $2.50
  + Total Due: $92.49

**Email 4 (Receipt)**

* **From:** orders@staples.com
* **Subject:** Your order #9942-A83B has shipped!
* **Body:** We've shipped your recent order.
  + 1 x HP LaserJet Printer: $250.00
  + 5 x Case of Printer Paper: $125.00
  + Subtotal: $375.00
  + Sales Tax: $22.50
  + Total: $397.50

**Email 5 (Irrelevant)**

* **From:** Marketing [newsletter@hubspot.com](mailto:newsletter@hubspot.com)
* **Subject:** 5 Marketing Trends You Can't Ignore in Q4
* **Body:** The marketing landscape is always changing. Stay ahead of the curve with our latest insights...

**Email 6 (Invoice)**

* **From:** accounting@innovate-consulting.com
* **Subject:** Invoice #INV-2025-08 for Services Rendered
* **Body:** Please find attached the invoice for consulting services provided in July.
  + Service: Market Analysis Report: $1,500.00
  + Service: Strategy Session: $500.00
  + Total: $2,000.00

**Email 7 (Receipt)**

* **From:** reservations@marriott.com
* **Subject:** Your Reservation Confirmation - Marriott Downtown
* **Body:** Thank you for your booking.
  + 1 King Bed, 2 Nights: $450.00
  + State & Local Taxes: $36.00
  + Resort Fee: $25.00
  + Total Charged: $511.00

**Email 8 (Irrelevant)**

* **From:** David Chen [d.chen@potential-partner.com](mailto:d.chen@potential-partner.com)
* **Subject:** Following up from the conference
* **Body:** It was great connecting with you at the Tech Summit last week. I'd love to schedule a brief call to explore potential synergies.

**Email 9 (Receipt)**

* **From:** no-reply@uber.com
* **Subject:** Your Wednesday afternoon trip with Uber
* **Body:** We hope you enjoyed your ride.
  + Trip Fare: $22.50
  + Booking Fee: $3.00
  + Total: $25.50

**Email 10 (Irrelevant)**

* **From:** HR Department [hr@yourcompany.com](mailto:hr@yourcompany.com)
* **Subject:** Action Required: Complete Your Annual Performance Review
* **Body:** This is a reminder to complete your self-assessment in the performance portal by August 20th.

**Part 3: The Expected AI Output**

After providing the prompt and the 10 emails, the AI correctly ignores the four irrelevant messages and produces the following clean, accurate table.

| **Product/Service** | **Cost** | **Tax** | **Other Fees** | **Total** |
| --- | --- | --- | --- | --- |
| Creative Cloud Annual Plan | $599.88 | N/A | N/A | $599.88 |
| Internet Service (1 Gig) | $79.99 | N/A | $12.50 | $92.49 |
| HP LaserJet Printer & Paper | $375.00 | N/A | $22.50 | $397.50 |
| Market Analysis & Strategy Session | $2,000 | N/A | N/A | $2,000.00 |
| 1 King Bed, 2 Nights |  | $450.00 | $61.00 | $511.00 |
| Trip Fare |  | $22.50 | $3.00 | $25.50 |
|  |  |  | **Total Expenses:** | **=SUM(D2:D4)** |
|  |  |  |  | **$869.72** |

**Part 4: Appending New Data**

After running the initial batch of 10 emails, your expense table looks like the one from the previous lesson. Now, you simply provide the new emails to the AI using the **exact same prompt** and then enter:

Data to Process:

[PASTE THE ADDITIONAL BATCH OF EMAILS HERE]

Final Instruction: After processing all additional emails, present the final populated table with all new and previous entries.

Expected out: An updated table with a running cost total/

This demonstrates the power of using a consistent prompt. You don't need to change the instructions; you just provide new data, and the AI assistant continues its work, building on the information it has already organized. This creates a simple yet powerful workflow for managing ongoing tasks.

NOTE: THIS IS HELP IN A LOGGIES JOB IN THE WAY OF, FOR EXAMPLE, TRACKING SIGNAL-J PAYBACKS, PRL DATA COLLECTION (IF GATHERING INPUT FROM STAKEHOLDERS), SPARES COST (ESPECIALLY WHEN COMPLING A KIT OVER TIME), AND MUCH MORE.

**Lesson 8: Prompting for an in-depth Presentation**

**Your Role:** You are a senior Defense Acquisition expert. Your knowledge is equivalent to a Level III certified professional in Program Management and Life Cycle Logistics, with a mastery of all concepts taught by the Defense Acquisition University (DAU).

**Your Task:** Generate a slide-by-slide script for a professional presentation on the 12 Integrated Product Support (IPS) Elements.

**Audience:** The presentation is for industry partners and government program managers who are familiar with acquisition but need a refresher on the IPS Elements. The tone should be authoritative and in-depth, yet engaging and concise.

**Persona & Context:**

* The presentation is being given by the "Naval Air Systems Command (NAVAIR), PMA-XXX Program Office."
* The goal is to reinforce the importance of designing for supportability from the beginning of a program's life cycle.

**Presentation Structure & Content Requirements:** Generate the content for the following slide structure. For each slide, provide a **Title**, 3-5 **Key Talking Points** (as bullet points), and a brief **Speaker's Note** to add context or detail.

* **Slide 1: Title Slide**
  + Title: The 12 Integrated Product Support (IPS) Elements: A Foundation for Program Success
  + Presented by: NAVAIR, PMA-XXX
  + Date: [Current Date]
* **Slide 2: Agenda**
  + List the key sections: Introduction, The 12 IPS Elements, and Conclusion.
* **Slide 3: Who We Are - PMA-XXX**
  + Briefly describe the program office's mission (e.g., "Delivering critical aviation capabilities to the warfighter").
* **Slides 4-15: The 12 IPS Elements (One Slide Per Element)**
  + Create a dedicated slide for each of the following 12 elements. Each slide should define the element and explain its importance to overall program success.
    1. Product Support Management
    2. Design Interface
    3. Sustaining Engineering
    4. Supply Support
    5. Maintenance Planning & Management
    6. Packaging, Handling, Storage, & Transportation (PHS&T)
    7. Technical Data
    8. Support Equipment
    9. Training & Training Support
    10. Manpower & Personnel
    11. Facilities & Infrastructure
    12. Computer Resources
* **Slide 16: Conclusion & Key Takeaway**
  + Summarize the core message: that these elements are integrated and must be considered early and concurrently to ensure system readiness and reduce life cycle costs.
* **Slide 17: Q&A**
  + A simple closing slide for questions.

**Final Instruction:** Please generate the complete script now.

**Expected Output:**

**Presentation Script: The 12 Integrated Product Support (IPS) Elements**

Here is the complete slide-by-slide content ready to be copied into your .ppt file:

**Slide 1: Title Slide**

* **Title:** The 12 Integrated Product Support (IPS) Elements: A Foundation for Program Success
* **Presented by:** NAVAIR, PMA-XXX
* **Date:** August 13, 2025
* **Visual:** A high-quality image of the primary aircraft or system managed by the program office.

**Slide 2: Agenda**

* **Title:** Agenda
* **Talking Points:**
  + Introduction & Purpose
  + The 12 Integrated Product Support Elements
  + Integration: The Key to Success
  + Conclusion & Questions

**Slide 3: Who We Are - PMA-XXX**

* **Title:** Our Mission
* **Talking Points:**
  + PMA-XXX is dedicated to the full life cycle management of the [Aircraft/System Name] platform.
  + Our primary focus is delivering and sustaining decisive, affordable, and readily available aviation capabilities to the Warfighter.
  + We achieve this through a disciplined systems engineering approach and a deep partnership between government and industry.
* **Speaker's Note:** "This presentation is about how we, as a collective team, ensure that sustainment is not an afterthought, but a core component of system design from day one."

**Slide 4: The 12 IPS Elements**

* **Title:** 1. Product Support Management
* **Talking Points:**
  + The development and implementation of the Product Support Strategy (PSS).
  + Defines the "how-to" for the entire support enterprise.
  + Involves creating and managing the Life Cycle Sustainment Plan (LCSP).
  + Integrates all other IPS elements through the Product Support Manager (PSM).
* **Speaker's Note:** "Think of this as the master plan. It's the framework that holds everything else together, ensuring we have a coherent strategy for sustaining the system throughout its life."

**Slide 5: The 12 IPS Elements**

* **Title:** 2. Design Interface
* **Talking Points:**
  + The integration of logistics and supportability requirements into the system design process.
  + Focuses on reliability, maintainability, and supportability characteristics.
  + Aims to reduce the logistics footprint and life cycle cost.
  + Key activities include Failure Modes, Effects, and Criticality Analysis (FMECA).
* **Speaker's Note:** "This is arguably the most critical element for long-term cost control. Every decision made here has a ripple effect that lasts for decades. A system designed for support is a system that will be available and affordable."

**Slide 6: The 12 IPS Elements**

* **Title:** 3. Sustaining Engineering
* **Talking Points:**
  + The technical effort to support an in-service system in its operational environment.
  + Identifies, reviews, and resolves technical deficiencies and obsolescence issues.
  + Manages Diminishing Manufacturing Sources and Material Shortages (DMSMS).
  + Ensures technical data remains accurate and complete.
* **Speaker's Note:** "Once a system is fielded, it's not static. Sustaining Engineering is the element that keeps the system safe, effective, and supportable as threats, technology, and components evolve over time."

**Slide 7: The 12 IPS Elements**

* **Title:** 4. Supply Support
* **Talking Points:**
  + All actions necessary to ensure that spares, repair parts, and supplies are available when and where they are needed.
  + Includes provisioning (determining the range and depth of items required).
  + Manages the entire supply chain, from forecasting demand to warehousing and distribution.
* **Speaker's Note:** "You can't fix a system with a part you don't have. Supply Support is the lifeblood of readiness, ensuring the right parts are in the right place at the right time."

**Slide 8: The 12 IPS Elements**

* **Title:** 5. Maintenance Planning & Management
* **Talking Points:**
  + Establishes the maintenance concept and requirements for the life of the system.
  + Defines the levels of repair (O, I, and D-Level) and the tasks performed at each level.
  + Includes Reliability-Centered Maintenance (RCM) analysis to create an efficient and effective maintenance program.
* **Speaker's Note:** "This element determines who fixes what, where they do it, and what they need to get it done. It's the detailed instruction manual for the entire maintenance enterprise."

**Slide 9: The 12 IPS Elements**

* **Title:** 6. PHS&T
* **Talking Points:**
  + **Packaging, Handling, Storage, and Transportation.**
  + Ensures that all system components and support items are preserved, packaged, handled, and transported correctly.
  + Prevents damage, degradation, or loss during shipment and storage.
  + Critical for sensitive electronics, hazardous materials, and delicate components.
* **Speaker's Note:** "This is an often-overlooked but vital element. A multi-million dollar component can be rendered useless by a $100 packaging failure. PHS&T protects our investment."

**Slide 10: The 12 IPS Elements**

* **Title:** 7. Technical Data
* **Talking Points:**
  + The recorded information required to acquire, operate, maintain, and support a system.
  + Includes technical manuals, engineering drawings, specifications, and software documentation.
  + Must be accurate, accessible, and managed throughout the system's life cycle.
* **Speaker's Note:** "Technical data is the authoritative 'source of truth' for the system. Without complete and accurate data, we cannot perform maintenance, procure spare parts, or conduct training effectively."

**Slide 11: The 12 IPS Elements**

* **Title:** 8. Support Equipment
* **Talking Points:**
  + All equipment (mobile or fixed) required to support the operation and maintenance of a system.
  + Includes test equipment, tools, and handling equipment.
  + Must be managed to ensure it is available, calibrated, and in good working order.
* **Speaker's Note:** "If the aircraft is the 'patient,' the support equipment is the 'doctor's medical kit.' We need to ensure maintainers have the right tools for the job."

**Slide 12: The 12 IPS Elements**

* **Title:** 9. Training & Training Support
* **Talking Points:**
  + The policy, processes, and products for training personnel to operate and maintain the system.
  + Includes the development of training curricula, simulators, and job aids.
  + Ensures maintainers and operators have the required proficiency to perform their duties safely and effectively.
* **Speaker's Note:** "A capable system is only as good as the people operating and maintaining it. This element ensures our Sailors and Marines are the best-trained force in the world."

**Slide 13: The 12 IPS Elements**

* **Title:** 10. Manpower & Personnel
* **Talking Points:**
  + Identifies the number and skills of personnel required to operate and support the system.
  + Considers the human factors engineering aspects to ensure the system is designed for the user.
  + Ensures the program is aligned with the Navy's overall personnel and manning strategies.
* **Speaker's Note:** "This element answers the fundamental question: 'Who do we need?' It's about identifying the human resources—in both quantity and skill—required to make the system work."

**Slide 14: The 12 IPS Elements**

* **Title:** 11. Facilities & Infrastructure
* **Talking Points:**
  + The permanent and semi-permanent real property assets required to support the system.
  + Includes hangars, maintenance shops, classrooms, and warehouses.
  + Ensures that physical infrastructure is ready and able to accommodate the system's operational and support needs.
* **Speaker's Note:** "We have to consider the physical footprint. A new, larger aircraft may require modifications to hangars or runways. This element ensures we plan for those needs well in advance."

**Slide 15: The 12 IPS Elements**

* **Title:** 12. Computer Resources
* **Talking Points:**
  + The facilities, hardware, software, and documentation needed to support mission-critical computer systems.
  + Includes everything from onboard avionics software to maintenance databases on the ground.
  + Manages cybersecurity, information assurance, and software support throughout the life cycle.
* **Speaker's Note:** "In a modern system, this is everything. Computer Resources ensures our software is secure, reliable, and supportable, which is foundational to mission success in the 21st century."

**Slide 16: Conclusion & Key Takeaway**

* **Title:** Integration is the Key to Success
* **Talking Points:**
  + The 12 IPS Elements are not a checklist; they are an **integrated set** of disciplines.
  + Decisions made in one element directly impact all others.
  + Early and concurrent consideration of all 12 elements is essential to developing a supportable and affordable system.
  + Our shared goal is to deliver readiness to the Warfighter, and that begins with a robust and integrated Product Support Strategy.
* **Visual:** A graphic showing the 12 elements as interlocking gears.

**Slide 17: Q&A**

* **Title:** Questions?
* **Contact Information:**
  + [Your Name/Office Title]
  + [Email Address]
  + [Phone Number]