OPENAI CODEX, AGENTS & REALTIME STUDIOS • FIELD GUIDE

# ChatGPT Canvas, Spaces & Computer Use

Move beyond single-player chat transcripts into a unified collaborative studio—editing prose and React prototypes side-by-side in Canvas, co-authoring living Pages inside team Spaces, and delegating multi-app workflows to gated virtual computers.

Split-Pane Canvas | Inline Shortcuts | Version Diffs | Multiplayer Spaces | Shared Pages | Gated Computer Use



**Surgical Split-Pane Canvas**

Highlight exact paragraphs or code blocks for targeted rewrites, inline comments, live React previews, and instant diff rollbacks.

**Multiplayer Spaces & Pages**

Unite teammates, persistent files, custom instructions, and living co-authored Pages in one shared workspace.

**Gated Computer Execution**

Delegate multi-step browser and connector workflows across Slack, Drive, and Salesforce behind explicit approval gates.

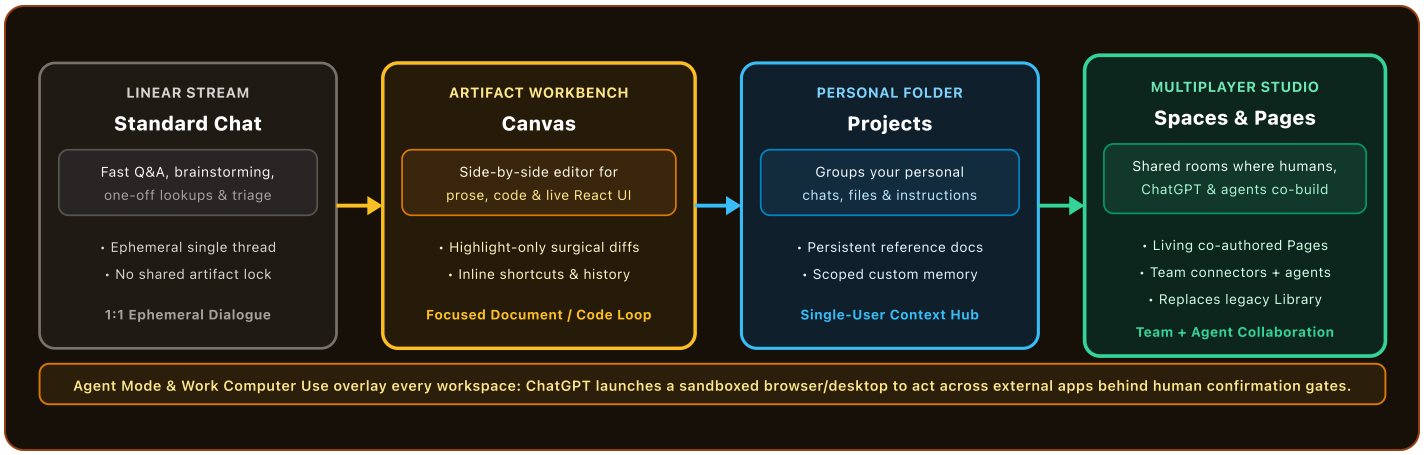
# From Single-Player Chat to Multiplayer & Delegated Work

Traditional chat threads force you to scroll endlessly through linear replies whenever you revise a document, share context with a team, or ask an assistant to act in another app. ChatGPT separates those jobs into three purpose-built surfaces: **Canvas** for surgical co-editing, **Spaces & Pages** for multiplayer collaboration, and **Agent Mode / Computer Use** for delegated execution.

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Golden Rule: Scope Tight, Gate Writes All

## How the Four ChatGPT Surfaces Fit Together




**The Core Design Shift: Artifacts Live Beside the Conversation, Not Inside It**

Whenever a draft grows past three paragraphs, requires teammates, or needs multi-step edits across external apps, promote it out of standard chat. Keep **Canvas** for focused individual drafting, **Spaces & Pages** for living team knowledge, and **Computer Use** for verifiable cross-app actions.

# Surface & Entitlement Decision Matrix

Every ChatGPT tier unlocks different limits across collaborative workspaces and autonomous virtual computers. Use the tables below to verify what your plan includes and pick the right surface before starting a project.

## Plan Entitlements Across Collaborative & Agentic Surfaces

| Surface / Capability | Free | Plus | Pro | Team / Enterprise |
|---|---|---|---|---|
| **Canvas Split-Pane & Shortcuts** | Included (standard rate limits; HTML/React preview). | Higher turn caps, reasoning models & full version diffs. | Highest priority throughput & extended context edits. | Full Canvas access with zero training on workspace data. |
| **Projects (Personal Context)** | Basic thread organization & starter file limits. | Up to 25+ reference files per Project & custom instructions. | Expanded file caps, deep research & fast switching. | Workspace-compliant personal Projects alongside Spaces. |
| **Multiplayer Spaces** | View shared links; limited solo workspace trials. | Create personal & small-group Spaces with invited peers. | Unlimited active Spaces & priority agent concurrency. | Org-wide Spaces, RBAC membership & admin audit logs. |
| **Live Co-Authored Pages** | Read-only shared Page previews. | Create, co-edit & embed charts/Canvas outputs in Pages. | Multi-page launches with rich interactive widgets. | Company-directory Pages, version retention & export policies. |
| **Agent Mode & Work Computer Use** | Not included (standard web search only). | Monthly Agent Mode quota; gated browser & app runs. | High monthly run allowance & parallel virtual desktops. | Admin-governed Slack, Drive & Salesforce connectors + SSO gates. |

## When to Use Which Workspace: Quick Routing Flowchart

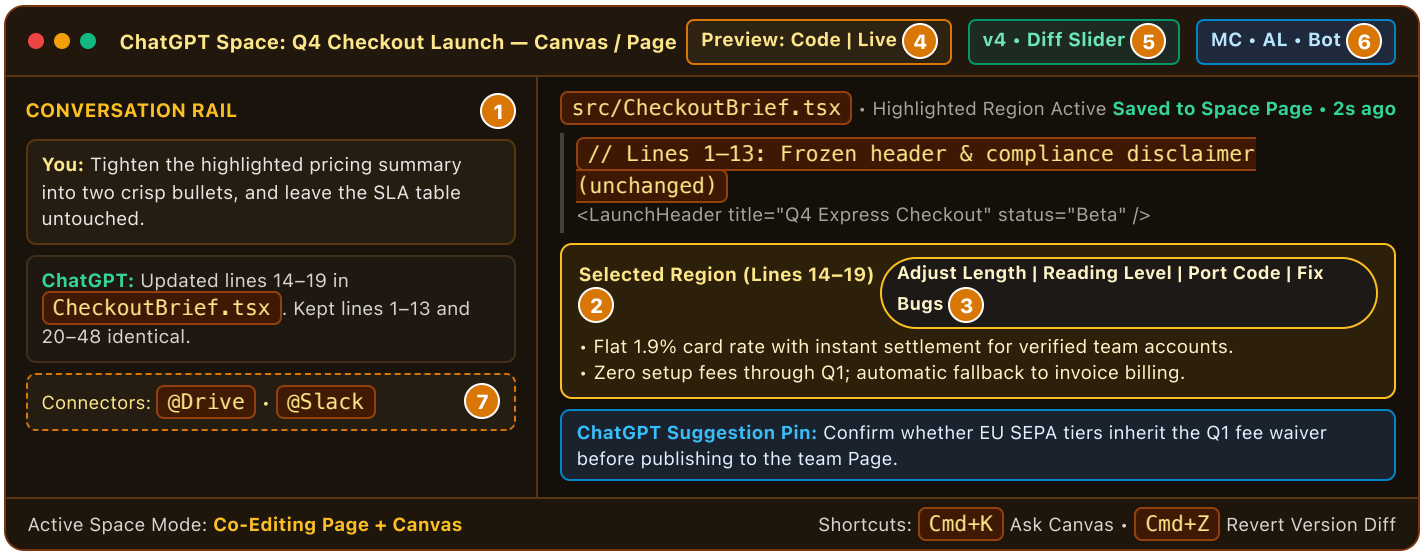
| If Your Immediate Goal Is… | Best Surface | Why This Surface Wins & How to Start |
|---|---|---|
| **Polish a memo, blog post, or single React component** | **Canvas** | Keeps untouched paragraphs frozen while you highlight lines for surgical rewrites, readability tuning, or live browser rendering. Trigger with `/canvas` or “Open in Canvas.” |
| **Maintain ongoing personal research with PDFs & style rules** | **Projects** | Gives all your private threads one shared system prompt and file drawer without exposing drafts to coworkers before they are ready. |
| **Build a product launch, RFP, or playbook with teammates** | **Spaces & Live Pages** | Replaces scattered chat links with one shared room holding team files, synced connectors, and living **Pages** that humans and ChatGPT co-edit together. |
| **Update CRM deals, triage Drive folders, or navigate web portals** | **Agent Mode / Computer Use** | Spins up an isolated cloud desktop & virtual browser that clicks, reads, and drafts cross-app updates—pausing at confirmation gates before any external write. |

**Pro Tip: Promote Cleanly From Personal Draft to Team Asset**

Start messy exploration in a private **Project**, refine the core deliverable inside **Canvas** until its structure holds, and publish the finished artifact into a shared **Space Page** so teammates inherit clean context without wading through your early prompts.

# Annotated Tour: Canvas Split-Pane & Space Controls

When Canvas opens inside a Space or chat, ChatGPT shifts from a single scrolling column into a synchronized dual-pane studio. Learn the seven controls below to steer edits without accidentally rewriting healthy work.




## Interface Legend: The 7 Canvas & Space Controls

1. **Left Conversation Rail:** Holds your running prompts, change summaries, and reasoning trail while keeping the actual deliverable stable on the right.
2. **Highlighted Selection Lock:** Selecting lines in the editor restricts ChatGPT's rewrite strictly to that highlighted block, protecting surrounding text.
3. **Floating Inline Shortcut Toolbar:** Appears automatically on selection or bottom-right corner with one-click sliders for length, reading level, bug fixes, and language porting.
4. **Code / Live Preview Toggle:** Renders HTML, Tailwind, and React components inside an interactive sandbox right inside the Canvas pane.
5. **Version History & Diff Slider:** Step backward through every draft snapshot, inspect line-by-line additions or deletions, and restore prior states in one click.
6. **Multiplayer Presence Avatars:** Displays teammates and active workspace agents viewing or co-authoring the shared Space Page simultaneously.
7. **Scoped App & File Mentions (`@Drive`, `@Slack`, `@Salesforce`):** Pull live files or trigger gated agent reads directly from the chat rail without leaving your Canvas draft.

# Mastering Canvas Surgical Edits

The fastest way to ruin a strong draft in standard chat is asking for a small tweak and watching the model rewrite paragraphs you already approved. Canvas eliminates collateral drift by pairing region highlighting with targeted shortcuts, inline review pins, live UI previews, and reversible version diffs.

### 1 Partial-Region Highlighting & Direct Typing

Drag your cursor over any sentence, bullet list, or function inside the Canvas pane before typing in the chat rail. ChatGPT sees exact start-and-end line markers and applies a scoped diff rather than regenerating the file. You can also click anywhere inside the Canvas to edit words directly like a normal document editor.

**Pro Move:** Combine manual tweaks on headings with AI rewrites on dense body paragraphs for effortless human-in-the-loop polish.

### 2 Targeted Comment Pins & Inline Reviews

Click **Suggest edits** (writing) or **Review code** (coding) to let ChatGPT place non-destructive comment pins along the margin instead of changing your text immediately. Each pin explains a logic gap, weak claim, or edge-case bug with an individual **Apply** button.

**Pro Move:** Ask for a legal, security, or executive-skeptic pass via pins before committing a single line change.

### A Writing Shortcuts

- **Adjust Length:** Slider from Shortest to Longest.
- **Reading Level:** Kindergarten through Graduate School.
- **Final Polish & Emojis:** Grammar, flow, and tone cleanup.

### B Coding Shortcuts

- **Fix Bugs & Add Logs:** Patch defects and trace runtime state.
- **Add Comments:** Clean JSDoc or docstring summaries.
- **Port Language:** Translate cleanly across TS, Python, Go, or C++.

### C Live Preview & Diff Rollback

- **Live Preview:** Render HTML, CSS & React components inline.
- **Show Changes:** Highlight green additions & red deletions.
- **Restore Version:** Jump back to any prior save instantaneously.



**Surgical Precision Without Collateral Edits:** Highlighting a region focuses ChatGPT's edit beam onto a single glowing band of prose or code—leaving surrounding sections, formatting, and approved logic completely intact while preserving full diff rollback history.

# Prompt Anatomy for Surgical Canvas & Shared Spaces

Vague prompts trigger whole-document rewrites and drift across team sessions. Use these six color-coded building blocks to lock scope inside Canvas and give shared Spaces crisp, durable rules that every teammate's thread respects.

[1. Target Scope / Selection] [2. Exact Edit Intent] [3. Voice / Code Standard] [4. Do-Not-Touch Lock] [5. Output / Page Format] [6. Connector & Write Gate]

## Formula 1: Surgical Canvas Rewrite Prompt (Zero Collateral Drift)

"Edit ONLY my highlighted pricing section (lines 14–24) inside the active Canvas. Replace passive onboarding phrasing with three concrete migration steps and add a fallback try/catch block in handleCheckout(). Match concise Stripe-style API docs tone and keep TypeScript strict with zero external npm dependencies. Do NOT alter the hero header, legal footer, or existing Tailwind color tokens outside lines 14–24. Show the diff in Canvas and summarize changed lines in two bullets in the chat rail."

## Formula 2: Persistent Shared Space Custom Instructions

"Workspace Role: You are the Launch Operations Editor for the Q4 Checkout Space, serving Product, Legal, and Engineering. Answer questions by citing uploaded Space files first and updating our living Launch Tracker Page whenever milestones change. Write in plain, scannable prose with bold action owners and ISO dates (YYYY-MM-DD). Never overwrite approved Legal sign-off sections on Pages; add proposed updates as inline review notes instead. Format status rollups as a 4-column table (Workstream, Owner, Blocker, Target Date). Before posting to #launch-ops in @Slack or modifying any @Salesforce or @Drive record, pause and present an explicit confirmation preview."

## Clause-by-Clause Cheat Sheet: Why Each Tag Prevents Rework

| Prompt Clause | Common Failure Without It | What to Write Instead |
|---|---|---|
| **Target Scope / Selection** | Model regenerates the entire 1,200-word brief or whole React file. | Name exact line numbers, heading titles, or highlight the region first. |
| **Do-Not-Touch Lock** | Approved pricing numbers, legal wording, or CSS tokens get silently changed. | Explicitly freeze protected sections and forbid unrequested refactors. |
| **Output / Page Format** | Edits spill into chat text instead of updating the Canvas or Space Page. | State whether edits belong in Canvas diff, inline pins, or a named Space Page. |
| **Connector & Write Gate** | Agent guesses wrong Slack channel or drafts premature CRM updates. | Require a preview card and human approval before any external write action. |

### Two-Second Sanity Check Before Hitting Enter

If your prompt touches an existing Canvas or shared Space Page, verify it contains both a **Scope** ("only lines X–Y") and a **Lock** ("leave Z unchanged"). Those two phrases eliminate over 80% of unwanted rewrites.

# Projects vs. Multiplayer Spaces & Live Pages

OpenAI evolved the older solo **Library** mindset into two distinct layers: private **Projects** for personal deep work, and multiplayer **Spaces** anchored by living **Pages** where human teammates, ChatGPT, and specialized agents share one persistent source of truth.

### 1 Retiring the Old Library Mental Model

In classic ChatGPT, generated images, docs, and old chats piled up inside a personal chronological **Library**—fine for solo lookup, painful for team projects. When a teammate needed context, you had to copy-paste prompts or export static PDFs that went stale within hours.

**Spaces** fix this by binding chats, uploaded knowledge files, synced cloud drives, and editable **Pages** into a single shared room.

### 2 Living Pages vs. Static Chat Threads

A **Page** inside a Space is a living, block-structured document combining crisp prose, tables, charts, and embedded Canvas prototypes. Instead of burying decisions in message #47 of a thread, humans and ChatGPT update the Page directly.

Use Pages for PRDs, launch checklists, customer research hubs, and weekly ops briefs that stay continuously current.

## Side-by-Side Architecture: Personal Projects vs. Multiplayer Spaces

| Capability | Projects (Personal Workbench) | Spaces & Pages (Multiplayer Studio) |
|---|---|---|
| **Audience & Access** | Strictly private to your account; ideal for personal notes, coding experiments, and rough drafts. | Shared with invited teammates, cross-functional groups, and workspace agents with role-based permissions. |
| **Knowledge Sources** | Uploaded PDFs, spreadsheets, and personal custom instructions scoped to your folder. | Curated team file library + live synced Drive folders, Slack channels, and CRM context shared across members. |
| **Primary Output Artifact** | Private chat threads and individual Canvas documents. | Living co-authored **Pages** plus linked Canvas drafts and automated agent digests. |
| **Agent Collaboration** | Single-user assistant runs inside your threads. | Tag ChatGPT or specialized agents inside shared threads and Pages so every teammate sees updates live. |

## 4-Step Blueprint: Setting Up a High-Signal Team Space

### 1 Curate Clean Knowledge Sources

Upload canonical PDFs, architecture specs, and brand guides (not ten outdated copies). Tag authoritative files with `[CANONICAL]` in filenames so ChatGPT prioritizes them.

### 2 Lock Space Instructions

Set clear voice, date formatting, citation rules, and connector confirmation guardrails once at the Space level so every teammate gets consistent quality.

### 3 Anchor With 2–3 Core Pages

Create one **Launch Brief Page**, one **Decision Log Page**, and one **Weekly Status Page** rather than letting answers vanish in chat history.

### 4 Invite Humans + Agents Together

Add engineering, PM, and legal reviewers with Editor or Commenter roles, and assign recurring research or triage tasks to workspace agents inside the same Space.

# Agent Mode & ChatGPT Work Computer Use

When information lives behind authenticated web portals or spans multiple business apps, copy-pasting screenshots slows you down. **Agent Mode** equips ChatGPT with a sandboxed virtual browser, terminal, and authorized connectors—executing multi-step workflows while pausing at strict human confirmation gates before irreversible actions.

### 1 Virtual Browser & Desktop

ChatGPT operates a live cloud workstation—clicking buttons, filling structured forms, inspecting tables, and running Python scripts inside an observable activity stream.

### 2 Work App Connectors

Pair virtual browsing with native workspace connectors for **Slack**, **Google Drive**, and **Salesforce** to read live records without brittle screen scraping.

### 3 Confirmation Gates & Takeover

Execution automatically pauses for **Human Approval** before sending messages, editing CRM records, or submitting payments—and lets you take over the cursor for 2FA logins.

**Read Freely, Gate Every Write: The Non-Negotiable Safety Contract**

Authorize agents to **search Slack threads, read Google Drive specs, and audit Salesforce opportunities** autonomously, then enforce a mandatory confirmation gate on every state change. Always review the exact proposed diff card (target channel, record ID, field values) before clicking **Approve**.



**Collaborative Spaces Meet Gated Virtual Desktops:** Human teams co-author shared golden Pages on the left while an autonomous agent operates sandboxed desktop views on the right—passing every external write back through a protective confirmation shield gate.

# 5 Real-World Copy-Paste Recipes

Drop any prompt below straight into ChatGPT Canvas, a team Space, or an Agent Mode session. Each recipe pairs tight scoping with explicit output targets and safe confirmation boundaries so you get production-grade results on the first run.

| Recipe & Surface | Controls Used | Copy-Paste Prompt Blueprint |
|---|---|---|
| **1. Executive Memo Surgical Polish**<br>**Canvas (Writing)** | Highlight Selection<br>`Reading Level`<br>`Version Diff` | "Open this memo in Canvas. Highlighted lines 10–28 only: tighten the financial rationale to three executive bullets at a crisp business reading level, quantify Q3 cost savings, and leave the Risk Matrix and Appendix untouched. Highlight your additions in the Canvas diff." |
| **2. Interactive React Prototype + Diffs**<br>**Canvas (Code + Live)** | `Live Preview`<br>`Fix Bugs`<br>`Restore v1` | "Build a single-file React + Tailwind ROI calculator in Canvas with live preview enabled. Keep all state in React hooks with zero external packages. After rendering v1, add an accessible CSV export button while leaving existing slider calculations untouched so I can compare the version diff." |
| **3. Cross-Functional Product Launch Space**<br>**Spaces & Pages** | Space Files<br>`Living Page`<br>Inline Pins | "In this Launch Space, read our uploaded PRD PDF and Design Spec. Create a shared Page titled Q4 Launch Command Center with four sections: Scope, Milestones Table, Open Risks, and QA Sign-Off. Flag any timeline mismatch between the PRD and Design Spec as inline comment pins." |
| **4. Salesforce-to-Drive CRM Hygiene**<br>**Agent Mode / Computer Use** | `@Salesforce`<br>`@Google Drive`<br>Confirm Gate | "Enter Agent Mode. Query `@Salesforce` for Enterprise opportunities untouched for 14+ days, cross-check call notes inside `@Google Drive` folder Sales-Q4, and stage recommended Next Step updates in a Canvas review table. Pause at a confirmation gate before writing any field back to Salesforce." |
| **5. Weekly Slack & Calendar Ops Brief**<br>**Spaces + Connectors** | `@Slack`<br>`Living Page`<br>Confirm Gate | "Read the last 7 days of `#eng-releases` and `#support-escalations` via `@Slack` plus this week's milestone calendar. Append a dated summary to our Weekly Ops Brief Page with Shipped, Blocked, and Decisions Needed. Draft a 5-bullet recap for `#leadership` and wait for my approval before posting." |

**Combining Canvas + Spaces for Maximum Leverage**

Draft fast, experimental UI or copy inside a **Canvas** tab first, verify it with Live Preview and Version Diffs, and then promote the clean result into a team **Space Page**. That keeps messy trial-and-error iterations out of your shared team history.

# Workspace Governance, Permissions & Boundaries

Multiplayer Spaces and virtual computers multiply team velocity—which means permissions, connector scopes, and training boundaries must be crystal clear before you invite colleagues or connect production systems.

### Space Membership Roles & Page Controls

- **Owner / Admin:** Manages member invites, Space-wide custom instructions, connector bindings, and archive/deletion controls.
- **Editor:** Co-authors live Pages, uploads Space reference files, opens Canvas drafts, and runs authorized agents.
- **Commenter / Viewer:** Leaves inline margin feedback and reads live Pages without altering canonical instructions or files.
- **External Sharing Rule:** Lock external link sharing off for internal Spaces containing customer PII or unreleased roadmaps.

### ! Connector Scopes & Training Opt-Out

- **Zero Training by Default (Team / Enterprise):** Conversations, Space files, Canvas drafts, and connector payloads are excluded from model training.
- **Consumer Tiers (Plus / Pro):** Disable *Improve the model for everyone* in Data Controls when working with confidential drafts.
- **Per-User OAuth Enforcement:** Connectors respect each user's existing Google Drive, Slack, and Salesforce ACLs—ChatGPT never elevates privileges.

## Safe Delegation Guardrails for Agent Mode & Computer Use

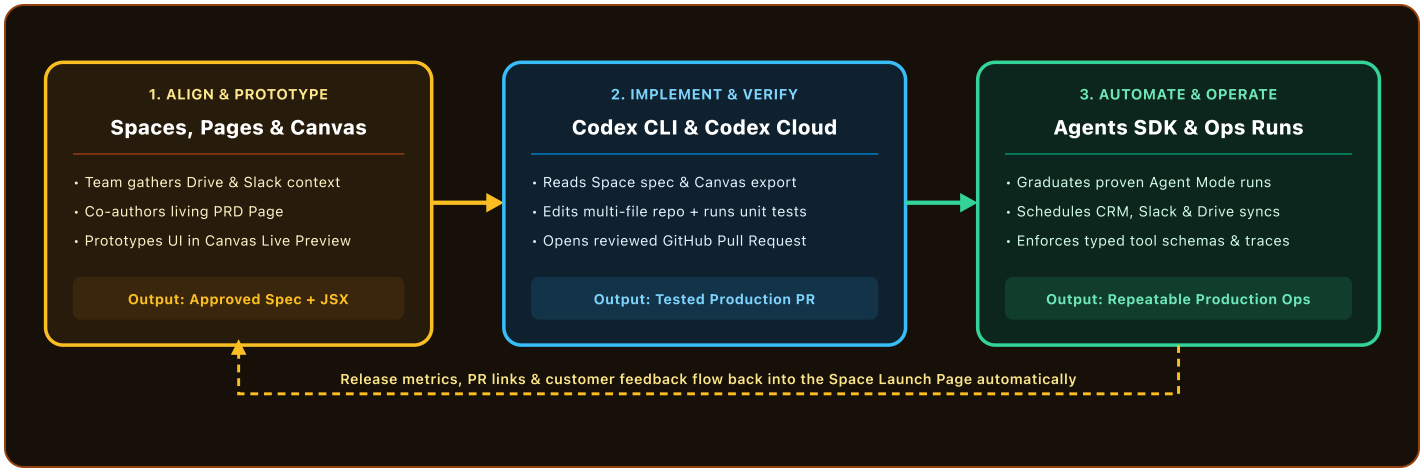
| Guardrail Layer | Risk Prevented | Recommended Workspace Configuration |
|---|---|---|
| **Domain Allowlists & Blocklists** | Agent wandering onto untrusted web domains or exfiltrating sensitive snippets via URLs. | Restrict virtual browser sessions to approved SaaS portals (docs, CRM, staging dashboards) in Admin Settings. |
| **Mandatory Write Confirmation** | Accidental mass Slack pings, wrong CRM stage transitions, or unreviewed file overwrites. | Keep confirmation gates enabled for all mutations, external emails, form submissions, and financial actions. |
| **Ephemeral Credential Hygiene** | Long-lived admin tokens lingering inside shared automated sessions. | Use Takeover Mode for interactive 2FA logins and never paste raw API secrets or passwords into Space instructions. |
| **Read-Only Service Accounts** | Excessive blast radius during exploratory research or reporting runs. | Bind reporting Spaces to least-privilege read scopes; reserve write connectors for dedicated gated workflows. |

**Audit Trail Advantage: Every Agent Click & Page Edit Leaves Receipts**

Before rolling out Agent Mode team-wide, run a one-week pilot inside a single Operations Space with three editors. Inspect the virtual computer's step log and Page version history every Friday to tune instruction locks and connector scopes.

# Cross-Tool Synergy: From Space Page to Production

ChatGPT Canvas and Spaces sit at the front of OpenAI's product stack. Once your team aligns on a spec inside a living Space Page and validates a UI prototype in Canvas, you can hand clean requirements straight into **Codex CLI / Cloud PRs** and automate recurring workflows with the **OpenAI Agents SDK**.




## How Teams Bridge All Three Stages Without Copy-Paste Friction

### 1 Canvas & Pages as Pre-Code Alignment

Instead of prompting Codex from vague bullet fragments, finalize your data schema, edge cases, and React layout inside a Canvas + Space Page first. Export the spec markdown straight into your repo's `docs/` or pass it to `codex` so engineering builds against verified requirements.

### 2 Graduating Agent Mode to Agents SDK

Use interactive **Computer Use** inside a Space to prototype a weekly CRM or support triage workflow by hand. Once the steps stabilize, codify those same Slack, Drive, and Salesforce tools inside the **OpenAI Agents SDK** for scheduled, trace-logged production automation.

**Rule of Thumb: Prototype visually in ChatGPT, Harden in Codex & Agents SDK**

Use Canvas and Spaces where speed, visual previews, and human team discussion matter most; hand off to Codex Cloud for multi-file test suites and to the Agents SDK whenever an operational task runs daily.

# Troubleshooting Clinic & Pre-Flight Checklist

Most workspace snags come from ambiguous scope, preview sandbox rules, or paused authentication gates. Keep this seven-issue diagnostic chart handy for ten-second fixes.

| Symptom / Issue | Root Cause | 10-Second Fix |
|---|---|---|
| **1. Canvas fails to open split pane** | Prompt was too short or looked like simple Q&A, keeping output in inline chat. | Prefix your prompt with `Open in Canvas:` or click the **Open in Canvas** icon under the generated code/text block. |
| **2. Full rewrite overwrote untouched sections** | No region was highlighted in the Canvas pane and prompt lacked a Do-Not-Touch lock. | Click **Show Changes** → **Restore Previous Version**, highlight only the target lines, and add "leave all other lines identical." |
| **3. Live preview shows a blank screen** | Component imports an unbundled third-party npm library or throws a runtime reference error. | Click **Fix Bugs** in the Canvas toolbar, inspect console errors, and stick to standard React hooks, Tailwind, and self-contained components. |
| **4. Space file permission mismatch** | A teammate lacks underlying Google Drive/Slack access or holds Viewer-only Space rights. | Verify Space membership is **Editor** and confirm the user has native read access to the linked Drive folder or upload a Space-local copy. |
| **5. Computer Use stalled at login / 2FA** | Protected portal presented SSO, MFA push, or human-verification challenge. | Click **Take Control / Takeover Mode** in the virtual desktop pane, complete sign-in manually, and hand control back to resume. |
| **6. Confirmation gate timed out** | An external write pause sat unanswered past the active session window. | Ask the agent to re-stage the pending diff card from its last verified read step and approve promptly while the session is active. |
| **7. Stale connector cache in Space** | A Google Doc or Salesforce record changed minutes ago, after the thread's initial context fetch. | Re-mention the connector explicitly ( `@Google Drive refresh [doc name]` ) in a fresh turn so the Space pulls the latest snapshot. |

## 6-Point Pre-Flight Checklist Before Launching a Team Space or Agent Run

- ☑ **Right Surface Picked:** Solo files stay in **Projects**, line edits in **Canvas**, team work in **Spaces & Pages**.
- ☑ **Selection & Locks Applied:** Highlighted exact Canvas lines and added a Do-Not-Touch clause before rewriting.
- ☑ **Canonical Space Files Clean:** Duplicate stale PDFs removed; Space custom instructions define tone and Page rules.
- ☑ **Connector ACLs Verified:** Confirmed `@Slack`, `@Drive`, and `@Salesforce` use least-privilege permissions.
- ☑ **Confirmation Gates Armed:** External posts, emails, and CRM field updates require explicit human click-to-approve.
- ☑ **Version & Rollback Checked:** Verified Canvas version history and Page revision snapshots before sharing widely.