GenX Collaborative System - Quick Start Guide

🚀 5-Minute Setup

Step 1: Start the Collaboration Server

bash

```bash
# Clone the repo
git clone https://github.com/genx-dev/collaborative-system
cd collaborative-system/collaboration-server

# Install and start
npm install
npm start

# Server runs on http://localhost:3000
```

Step 2: Install Chrome Extension (for Domain Experts)

1. Open Chrome → `chrome://extensions`
2. Enable "Developer mode" (top right)
3. Click "Load unpacked"
4. Select `/chrome-extension` folder
5. Pin the extension to toolbar

Step 3: Install VS Code Extension (for Developers)

bash

```bash
cd vscode-extension
npm install
npm run compile

# Package and install
npx vsce package
code --install-extension genx-*.vsix
```

👥 How It Works

Domain Expert Workflow (Non-Technical Users)

1. **Open any website** with the Chrome extension active
2. **Click the extension icon** → Enter your name
3. **Click elements** on the page that need improvement
4. **Add annotations** like:
   - "This price should show currency symbol"
   - "Image needs description for screen readers"
   - "This text is too small to read"
5. **Review developer fixes** when they appear
6. **Approve or reject** with feedback

Developer Workflow (Technical Users)

1. **Open HTML file** in VS Code
2. **Press Cmd+Shift+A** to connect to collaboration session
3. **See annotations** appear in Problems panel
4. **Click lightbulb** for quick fixes
5. **Apply GenX attributes** automatically
6. **Send proposals** back to users for approval
7. **Export manifest** for deployment

🎯 Real Example

Domain Expert sees:

Website shows: 2499.99
Annotation: "This should display as $2,499.99"

Developer receives:

javascript

```
{
  selector: ".price",
  annotation: "This should display as $2,499.99",
  priority: "high",
  context: { valueType: "currency" }
}
```

Developer proposes:

html

```html
<!-- Before -->
<span class="price">2499.99</span>

<!-- After -->
<span class="price" fx-format="currency" fx-currency="USD">2499.99</span>
```

Domain Expert approves → Fix is applied!

💡 Key Benefits

For Domain Experts

- **No coding required** - Just point and describe
- **Real-time collaboration** - See developers working
- **Validation power** - Approve/reject changes
- **Domain knowledge valued** - Your expertise matters

For Developers

- **Clear requirements** - No guessing what users want
- **Contextual feedback** - Understand the "why"
- **Faster approval** - Pre-validated fixes
- **Less back-and-forth** - Real-time clarification

For Organizations

- **Faster compliance** - Parallel discovery and fixing
- **Better quality** - Domain experts validate
- **Cost savings** - Reduce iteration cycles
- **Team empowerment** - Everyone contributes

🔧 Common Scenarios

Scenario 1: E-commerce Accessibility

Marketing Manager: "All prices need currency symbols"

Developer: Adds fx-format="currency" to all .price elements

Manager: Approves after preview

Result: Site-wide fix in minutes, not days

Scenario 2: Healthcare Compliance

Nurse: "This form needs clearer labels for medications"

Developer: Adds detailed aria-labels

Nurse: Tests with screen reader, approves

Result: HIPAA-compliant forms

Scenario 3: International Sites

Translator: "Dates wrong format for Spanish users"

Developer: Adds fx-locale="es-ES" attributes

Translator: Validates formatting

Result: Properly localized content

🎨 What Gets Generated

The system produces a **GenX Manifest** that can be:

1. **Applied immediately** in VS Code
2. **Exported as JSON** for other developers
3. **Used in CI/CD** pipelines
4. **Converted to tests** for validation

Example manifest:

json

```json
{
  "transformations": [
    {
      "selector": ".price",
      "attributes": {
        "fx-format": "currency",
        "fx-currency": "USD"
      },
      "approvedBy": "jane@example.com",
      "annotation": "Display with currency symbol"
    }
  ]
}
```

🚦 Status Indicators

Chrome Extension

- 🟢 **Green** - Connected to server
- 🟡 **Yellow** - Developer reviewing
- 🔵 **Blue** - Proposal awaiting approval
- 🔴 **Red** - Connection issue

VS Code

- **Problems Panel** - Shows all annotations
- **Status Bar** - Connection status
- **Code Lens** - Inline suggestions

🆘 Troubleshooting

Can't connect?

1. Check server is running: `http://localhost:3000/health`
2. Verify URL matches between Chrome and VS Code
3. Check firewall allows WebSocket connections

Annotations not appearing?

1. Ensure both parties are on same URL
2. Check role settings (domain expert vs developer)
3. Refresh the connection

Changes not applying?

1. Verify selector specificity
2. Check for conflicting CSS
3. Ensure GenX libraries are loaded

📚 Learn More

- **Full Documentation**: [See COLLABORATIVE-ARCHITECTURE.md](#)
- **VS Code Extension**: [See vscode-extension/README.md](#)
- **Chrome Extension**: [See chrome-extension/README.md](#)
- **Server API**: [See collaboration-server/API.md](#)

🎉 You're Ready!

Start collaborating on better web accessibility today. The system handles the technical complexity while you focus on making the web better for everyone.

Remember: Domain experts identify problems, developers implement solutions, everyone wins!