Making your APIs AI-Ready

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Designing for a world where machines read your APIs

Shift #4 : Enable Discovery
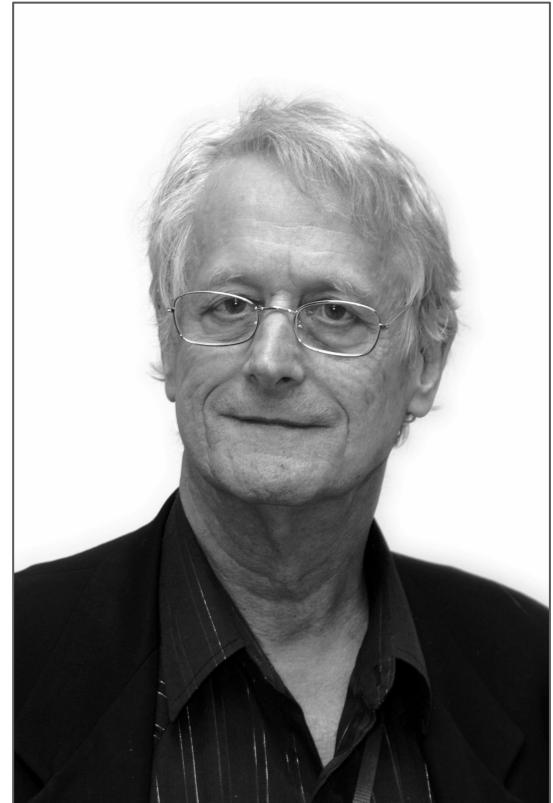
Enable Discovery : Overview

- Stop hiding capabilities
- Why this is important
- Beyond documentation
- What we can do right now

Enable Discovery

"Everything is deeply intertwingled"

– Ted Nelson

Enable Discovery : Stop hiding capabilities

- If bots can't find it, they won't use it
- Machines depend on in-message signals
- Discovery works at both the service and task level
- Bots are tuned for discovery

Discovery is a feature, not an afterthought

Enable Discovery : Why this is important

- Machine won't look for external docs
- Supplying just the API docs is rarely enough
- Machines recognize and react to "signals"
- Think of your API as a "maze" the agent needs to solve

Help machines navigate the maze

Enable Discovery : Beyond documentation

- Prose documentation is good, but not sufficient
- Machines don't make leaps of though or assumptions
- Without explicit signals, machines hallucinate

Enable Discovery

```
- {
    id: "fb4a2427-2cff-41b6-a61b-e96bccacfa0e",
    title: "Initial Task",
    description: "This is a sample task",
    dueDate: "2025-06-01",
    status: "active",
    priority: 3,
    assignedUser: "alice",
  - _links: {
      - self: {
          href: "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacfa0e",
          method: "GET"
        },
      - edit: {
          href: "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacfa0e/edit",
          method: "POST",
        + args: [ … ]
        },
      - updateStatus: {
          href: "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacfa0e/status",
          method: "PUT",
        - args: [
            "id",
            "status"
          ]
        },
      - assignUser: {
          href: "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacfa0e/assignee",
          method: "PUT",
        - args: [
            "id",
            "assignedUser"
          ]
        },
      - setDueDate: {
```

Enable Discovery

```
- {
    id: "fb4a2427-2cff-41b6-a61b-e96bccacfa0e",
    title: "Initial Task",
    description: "This is a sample task",
    dueDate: "2025-06-01",
    status: "active",
    priority: 3,
    assignedUser: "alice",
  - _links: {
      - self: {
          href: "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacfa0e",
          method: "GET"
        },
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        + args: [ … ]
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          href: "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacfa0e/status",
          method: "PUT",
        - args: [
            "id",
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          ]
        },
      - assignUser: {
          href: "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacfa0e/assignee",
          method: "PUT",
        - args: [
            "id",
            "assignedUser"
          ]
        },
      - setDueDate: {
```

Enable Discovery

```json
{
  "id": "fb4a2427-2cff-41b6-a61b-e96bccacfa0e",
  "title": "Initial Task",
  "description": "This is a sample task",
  "dueDate": "2025-06-01",
  "status": "active",
  "priority": 3,
  "assignedUser": "alice",
  "_links": {
    "self": {
      "href": "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacfa0e",
      "method": "GET",
      "description": "Retrieve the current details for this task."
    },
    "edit": {
      "href": "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacfa0e/edit",
      "method": "POST",
      "args": [],
      "description": "Update one or more attributes of this task."
    },
    "updateStatus": {
      "href": "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacfa0e/status",
      "method": "PUT",
      "args": [
        "id",
        "status"
      ],
      "description": "Change the status of this task."
    },
    "assignUser": {
      "href": "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacfa0e/assignee",
      "method": "PUT",
      "args": [
        "id",
        "assignedUser"
      ],
      "description": "Assign this task to a specific user."
```

Include navigation metadata in responses

Enable Discovery : What we can do right now

- Maintain and use an API registry
    - Postman, Swagger, etc. for public APIs
    - Kong, WS02, etc. for internal APIs
- Manage vocabularies with tags for findability
- Publish and use API vocabularies

*Enable discovery **across** APIs, too.*

Enable Discovery : Summary
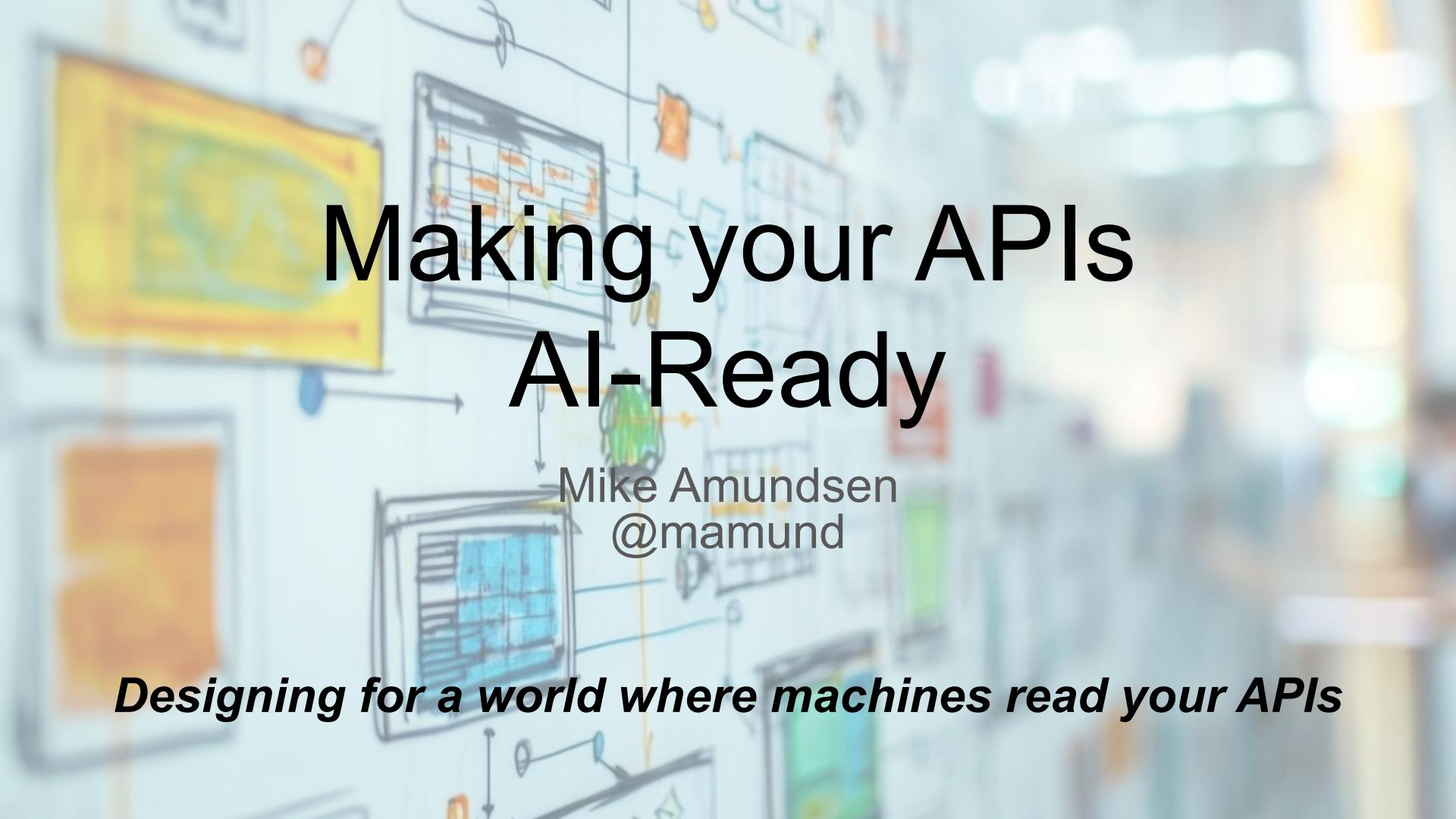
- Stop hiding capabilities
  - If they can't find it, they won't use it
- Why this is important
  - Help machines navigate "the maze"
- Beyond documentation
  - Include navigation metadata in responses
- What we can do right now
  - Maintain and use registries and vocabularies

Enabling discovery makes autonomy possible

Shift #4 : Enable Discovery

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