

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

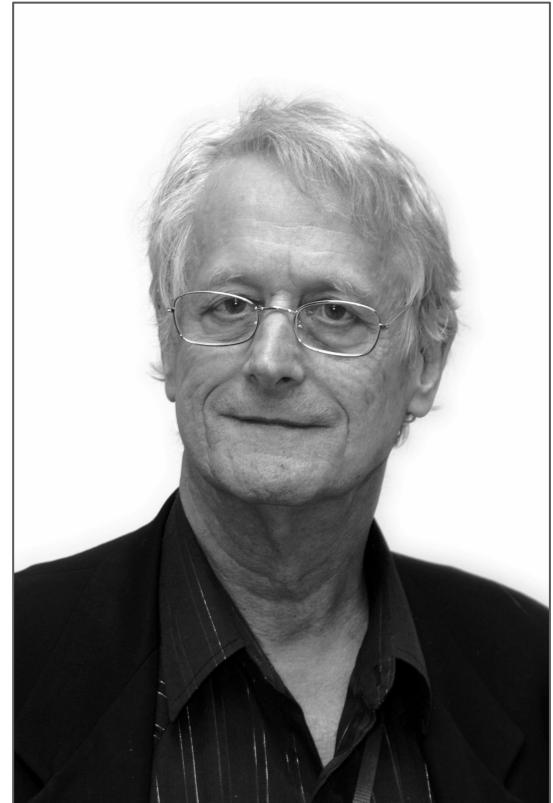


- Stop hiding capabilities
- Why this is important
- Beyond documentation
- What we can do right now

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 thought or assumptions
- Without explicit signals, machines hallucinate

Enable Discovery

```
- {
  id: "fb4a2427-2cff-41b6-a61b-e96bccacf0e",
  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-e96bccacf0e",
      method: "GET"
    },
    - edit: {
      href: "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacf0e/edit",
      method: "POST",
      + args: [ ... ]
    },
    - updateStatus: {
      href: "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacf0e/status",
      method: "PUT",
      - args: [
        "id",
        "status"
      ]
    },
    - assignUser: {
      href: "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacf0e/assignee",
      method: "PUT",
      - args: [
        "id",
        "assignedUser"
      ]
    },
    - setDueDate: {
      href: "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacf0e/dueDate",
      method: "PUT",
      - args: [
        "dueDate"
      ]
    }
  }
}
```

Enable Discovery

```
- {
  id: "fb4a2427-2cff-41b6-a61b-e96bccacf0e",
  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-e96bccacf0e",
      method: "GET"
    },
    - edit: {
      href: "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacf0e/edit",
      method: "POST",
      + args: [ ... ]
    },
    - updateStatus: {
      href: "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacf0e/status",
      method: "PUT",
      - args: [
        "id",
        "status"
      ]
    },
    - assignUser: {
      href: "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacf0e/assignee",
      method: "PUT",
      - args: [
        "id",
        "assignedUser"
      ]
    },
    - setDueDate: {
      href: "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacf0e/dueDate",
      method: "PUT",
      - args: [
        "dueDate"
      ]
    }
  }
}
```

Enable Discovery

```
{  
    "id": "fb4a2427-2cff-41b6-a61b-e96bccacf0e",  
    "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-e96bccacf0e",  
            "method": "GET",  
            "description": "Retrieve the current details for this task."  
        },  
        "edit": {  
            "href": "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacf0e/edit",  
            "method": "POST",  
            "args": [],  
            "description": "Update one or more attributes of this task."  
        },  
        "updateStatus": {  
            "href": "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacf0e/status",  
            "method": "PUT",  
            "args": [  
                "id",  
                "status"  
            ],  
            "description": "Change the status of this task."  
        },  
        "assignUser": {  
            "href": "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacf0e/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

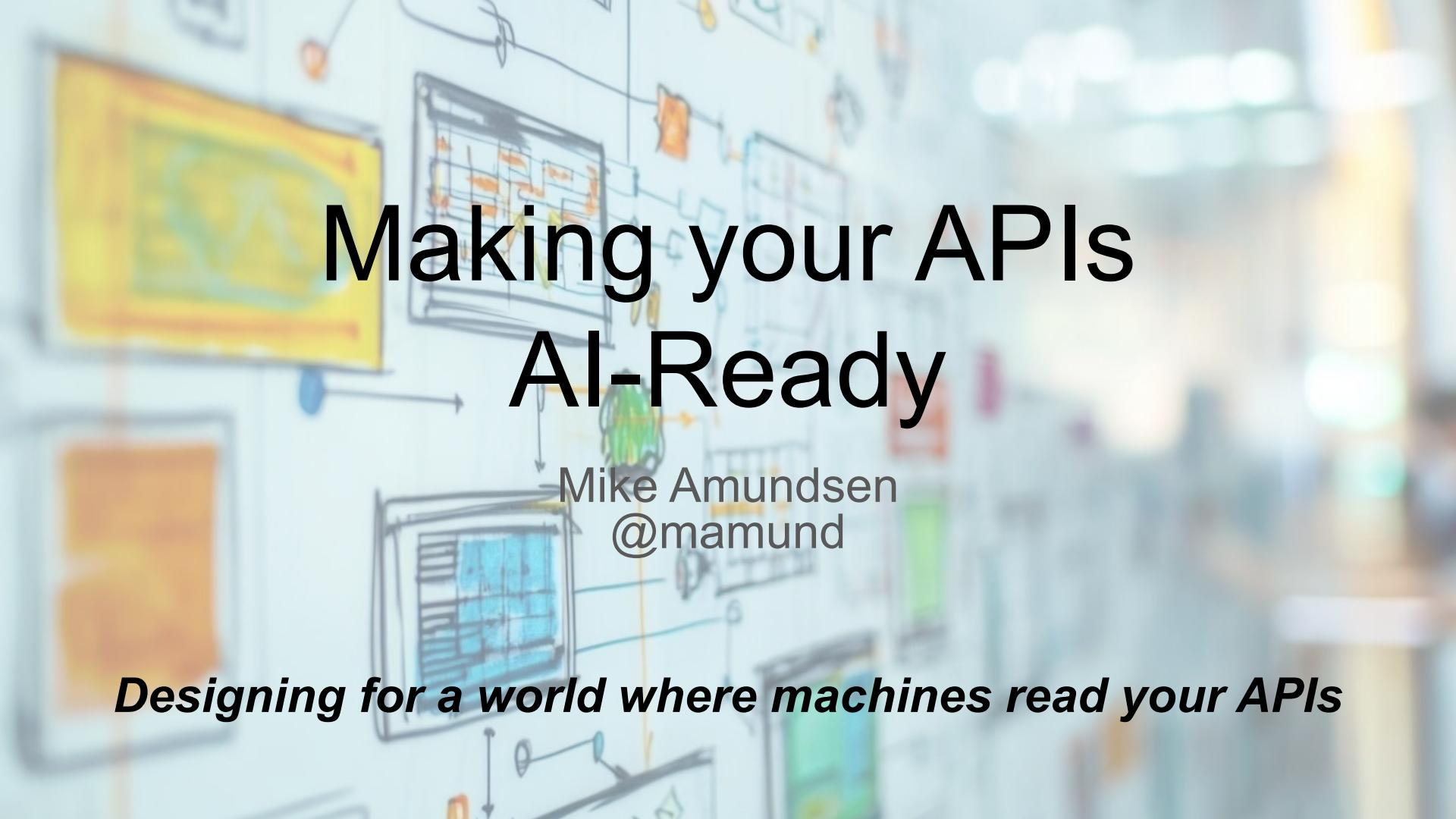
Enabling Discovery : Quick Quiz

- 5.1 Enabling discovery makes _____
- A. it harder for ai-agents to find and use your APIs
 - B. AI-driven autonomy possible
 - C. it too difficult to deploy APIs
 - D. designing APIs impractical
- 5.2 All APIs should be listed in one or more _____
- A. github repositories
 - B. product manager's spreadsheets
 - C. shared API registries
 - D. audit logs
- 5.3 Without explicit signals in the API documentation, machines will _____
- A. do just fine
 - B. reach out to external documents for help
 - C. not make any API calls at all
 - D. hallucinate interactions



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