Nx Monorepo Structure

Nx with libs/apps separation. Affected commands and code generators.

#monorepo #nx #workspace #typescript #enterprise

PNG PDF Copy Prompt

Project Directory

```
my-workspace/
  apps/ Thin, deployabl…
    web/ React/Next app
      src/
      project.json Nx project conf…
      tsconfig.json
    web-e2e/ E2E tests for w…
      src/
      project.json
    api/ NestJS backend
      src/
      project.json
  libs/ Shared libraries
    shared/ Cross-cutting c…
      ui/ UI components
        src/
          index.ts
        project.json
      utils/ Utility functio…
        src/
        project.json
    feature/ Feature modules
      auth/
        src/
        project.json
      dashboard/
        src/
        project.json
    data-access/ API clients, st…
      api-client/
        src/
        project.json
  tools/ Custom generato…
    generators/
  nx.json Nx workspace co…
  package.json
  tsconfig.base.json Path mappings
  .gitignore
```

Why This Structure?

Nx enforces boundaries with its libs architecture. Apps are thin shells; logic lives in libs. `nx affected` runs only what changed. Generators scaffold consistent code. The dependency graph powers intelligent caching and parallel execution.

Key Directories

apps/ - Thin shells that compose libs

libs/shared/ - Cross-app utilities and components

libs/feature/ - Domain-specific feature modules

libs/data-access/ - API clients and state management

Library Types

feature - Smart components with business logic

ui - Presentational/dumb components

data-access - State, API calls, data fetching

util - Pure functions, helpers

Getting Started

```
npx create-nx-workspace@latest
nx generate @nx/react:lib shared/ui
nx affected --target=build
```

When To Use This

- Large teams with module boundaries
- Enterprise apps with strict architecture
- Need code generators for consistency
- Complex dependency graphs

Trade-offs

Steeper learning curve - More concepts than Turborepo

Project-per-lib overhead - Many `project.json` files

Nx-specific patterns - Tighter coupling to Nx tooling