

# **Production Supporting Systems in Factories**

**ระบบสนับสนุนการผลิตในโรงงานอุตสาหกรรม**

# Setting up Node-Red

# Software

- Install [Node.js](#) (Version 22)
- Install [Visual Studio Code](#)

# VSCode

- Change default terminal in `VSCode` (Windows only)
  - Open a window
  - Select `terminal` -> `New Terminal`
  - press `ctrl` + `p`
  - Type `> Terminal: Select Default Profile` and click
  - Select `cmd`

# Package manager

- `Node.js` comes with `npm` package manager.
  - But it is quite slow.
- Let's use a more performant package manager call `pnpm`.
  - `npm install -g pnpm`

# Install Node-Red (1)

- Create a new folder
- Drag a folder into VSCode
- Select terminal -> New Terminal
- *(Terminal)* pnpm init
- *(Terminal)* pnpm install node-red

# Start Node-Red

- *(Terminal)* `pnpm exec node-red -u .`
- Visit the web browser at
  - `http://127.0.0.1:1880` or
  - `http://localhost:1880`

# Navigating around Node-Red



# Create flows to

- Show timestamp in the `debug` panel.
- Show date and time using `function` node. *(See code on the other page.)*
- Send continuous random numbers. (Use `Math.random()` )
- Use `switch` and `change` .

```
const date = new Date();  
msg.payload = date.toDateString();  
return msg;
```