At Socionext, we apply an optimized flow according to the features of the SoC to be developed, according to the following design flow.

**Standard Design and Development Flow**

1. **Requirement specification formulation**
2. **Development planning**
3. **System-level design**
   - **System specification formulation**
4. **Function verification**
5. **Logic synthesis**
6. **Verification**
7. **Software design and development flow**
   - **Specification formulation**
8. **Test design**
9. **OS migration**
10. **Boot development**
11. **Driver development**
12. **App development**

**Contents**

- Consulting service
- Development support service
- Provision of subsystems
- Provision of IP
- Design technology
- Specification I/F
- SOC specification I/F
- RTL I/F
- Netlist I/F

**Consulting service**
- Algorithm design support
- Provision of subsystems
- Provision of IP
- Provision of front design kit
- Power supply/crosstalk analysis
- Power rail analysis
- Gate simulation
- Package design
- PCB design
- Test circuit insertion
- Package prototyping
- Package selection
- DFT
- Test pattern generation
- Test pattern generation

**Development support service**
- Software development service
- Prototype board development service
- LPB co-design support service
- Power supply/crosstalk analysis
- Power rail analysis
- Gate simulation
- Package design
- PCB design
- Test pattern generation
- Test pattern generation

**Provision of subsystems**
- Algorithm design support
- Provision of subsystems
- Provision of IP
- Provision of front design kit
- Power supply/crosstalk analysis
- Power rail analysis
- Gate simulation
- Package design
- PCB design
- Test pattern generation
- Test pattern generation

**Provision of IP**
- Algorithm design support
- Provision of subsystems
- Provision of IP
- Provision of front design kit
- Power supply/crosstalk analysis
- Power rail analysis
- Gate simulation
- Package design
- PCB design
- Test pattern generation
- Test pattern generation

**Design technology**
- Algorithm design support
- Provision of subsystems
- Provision of IP
- Provision of front design kit
- Power supply/crosstalk analysis
- Power rail analysis
- Gate simulation
- Package design
- PCB design
- Test pattern generation
- Test pattern generation

**Application Development**
-社内設計
-外部顧客

**Interface with Customer**

- Customer's part
- Socionext's part

**Sign-off**
- Sample shipment
- Mass-production shipment

**Packaging**
- Package selection
- Package prototyping
- Package design

**Physical Design**
- Lithography verification
- Power rail analysis
- Gate simulation

**Verification**
- Test pattern generation
- Test pattern generation
- Test pattern generation
- Test pattern generation

**Planning**
- System-level design
- System specification formulation
- Requirement specification formulation
- Development planning

**Logic Design**
- Algorithm design
- RTL design
- High-level synthesis

**Front-end design**
- Algorithm design
- RTL design
- High-level synthesis

**Back-end design**
- Design planning
- Layout
- Variation timing analysis
- Crosstalk noise analysis
- Lithography verification
- Power rail analysis
- Gate simulation

**Management**
- Management

**Software development service**
- Algorithm design support
- Provision of subsystems
- Provision of IP
- Provision of front design kit
- Power supply/crosstalk analysis
- Power rail analysis
- Gate simulation
- Package design
- PCB design
- Test pattern generation
- Test pattern generation

**Prototype board development service**
- Algorithm design support
- Provision of subsystems
- Provision of IP
- Provision of front design kit
- Power supply/crosstalk analysis
- Power rail analysis
- Gate simulation
- Package design
- PCB design
- Test pattern generation
- Test pattern generation

**LPB co-design support service**
- Algorithm design support
- Provision of subsystems
- Provision of IP
- Provision of front design kit
- Power supply/crosstalk analysis
- Power rail analysis
- Gate simulation
- Package design
- PCB design
- Test pattern generation
- Test pattern generation

**Low power consumption technology**
- Algorithm design support
- Provision of subsystems
- Provision of IP
- Provision of front design kit
- Power supply/crosstalk analysis
- Power rail analysis
- Gate simulation
- Package design
- PCB design
- Test pattern generation
- Test pattern generation

**Packaging**
- Package selection
- Package prototyping
- Package design

**Package design**
- Package selection
- Package prototyping
- Package design

**Package selection**
- Package selection
- Package prototyping
- Package design

**Package prototyping**
- Package selection
- Package prototyping
- Package design

**Package design**
- Package selection
- Package prototyping
- Package design

**Physical aware synthesis**
- Mode-corner optimization
- Physical aware synthesis

**Packaging/manufacturing technology**
- Lithography verification
- Sample shipment
- Mass-production shipment