

Source: Whitten, J.L., L.D. Lonnie and K.C. Dittman, *Systems Analysis and Design Methods*, 6th ed., McGraw-Hill, Boston, 2004.

BAB 9: PERANCANGAN SISTEM INFORMASI

MONICA A. KAPPIANTARI - 2009

Analisis Perancangan Sistem Informasi

Bab 9: Perancangan Sistem Informasi

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Referensi

- Whitten bab 12
- www.teknikindustri.org

Topik

- Pendekatan Perancangan Sistem:
 - Model driven approaches
 - Rapid Application Development
 - FAST
- Fase Perancangan Sistem
 - In-house
 - Buying Commercial software

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1. Pendekatan Perancangan Sistem

Perancangan Sistem

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- **Perancangan Sistem** – spesifikasi solusi berbasis komputer yang rinci
- Analisis sistem vs. Perancangan Sistem:
 - Analisis sistem menitikberatkan pada masalah bisnis
 - Perancangan sistem menitikberatkan pada hal-hal teknis
- Pendekatan Perancangan Sistem:
 1. *Model-Driven*
 - *Modern structured design*
 - *Information engineering*
 - *Prototyping*
 - *Object-oriented*
 2. *RAD / JAD*
 3. *FAST*

1. Model Driven

Model-driven strategy – pendekatan perancangan sistem yang dititikberatkan pada model sistem untuk dokumentasi aspek teknis dan implementasi sebuah sistem

- **Modern structured design** – teknik perancangan sistem yang membagi proses menjadi komponen yang dapat diatur
- **Information engineering (IE)** –*model-driven* dan *data-centered*, tapi merupakan teknik yang *process-sensitive* untuk perencanaan, analisis dan perancangan sistem informasi

1. Model Driven (lanjutan)

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- **Prototype** – Contoh dalam skala kecil dan belum lengkap namun telah menggambarkan sistem yang diharapkan
- **Object-oriented design (OOD)** – teknik yang digunakan untuk:
 - Menyempurnakan kebutuhan obyek yang telah diidentifikasi dalam analisis
 - mendefinisikan obyek rancangan khusus

2. RAD/JAD

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- **Joint Application Development (JAD)** – teknik yang melengkapi teknik analisis dan perancangan sistem dengan menekankan pengembangan partisipatif *system owners, users, designers, and builders*
- **Rapid application development (RAD)** – menggunakan struktur, *prototyping*, dan teknik JAD untuk membangun sistem dengan cepat

3. FAST

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- Mengintegrasikan seluruh prosedur yang telah dipelajari pada pendekatan pertama (Model Driven) dan kedua (RAD/JAD)

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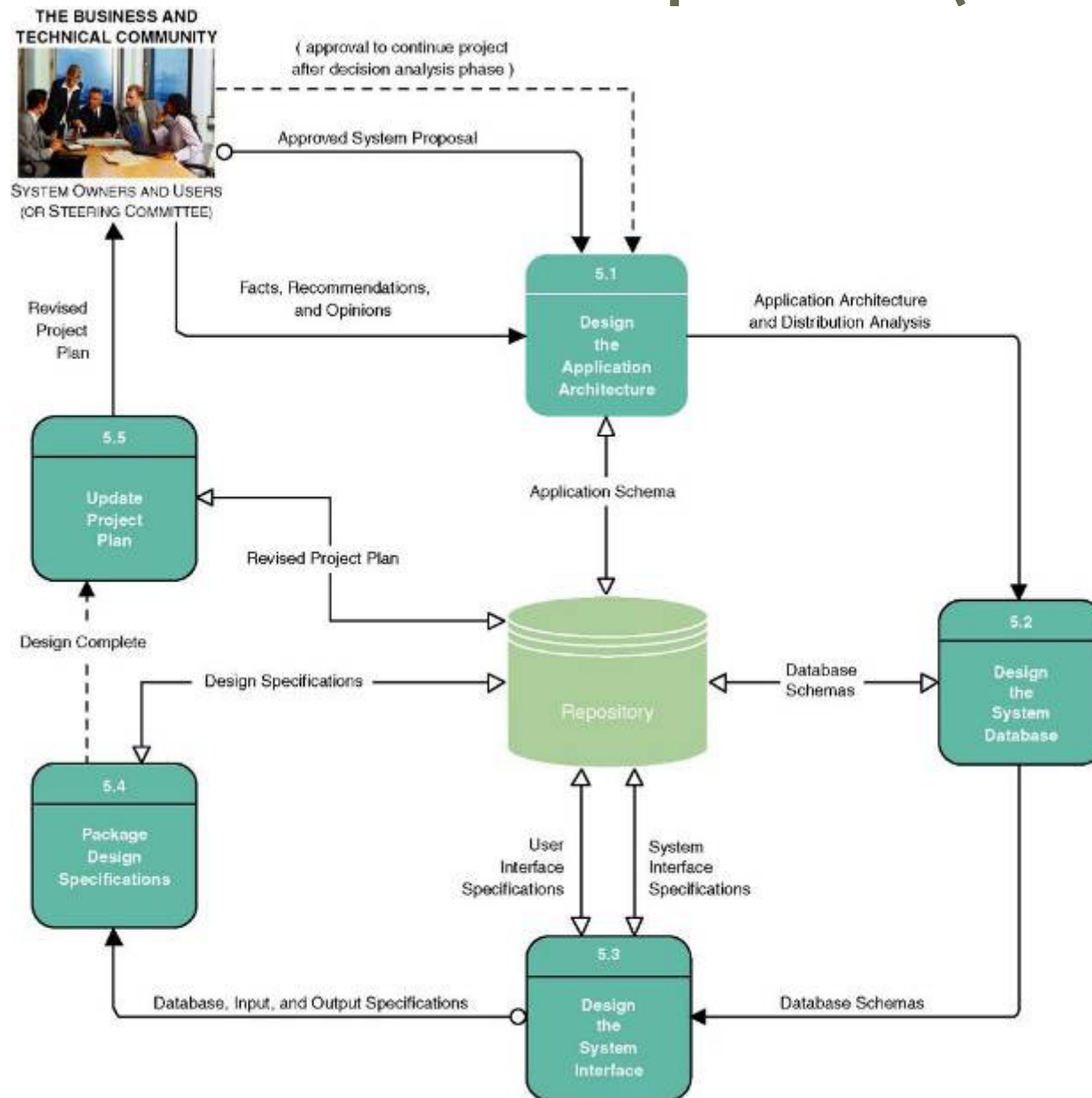
Fase Perancangan Sistem

1. In-house Development

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- *Design the Application Architecture*
 - *Defines the technologies to be used by (and used to build) one, more, or all information systems.*
 - *Revise models as physical models (e.g. Physical Data Flow Diagram)*
- *Design the System Databases*
 - *Database schema*
 - *Optimized for implementation DBMS*
- *Design the System Interface*
 - *Input, output, and dialogue specifications*
 - *Prototypes*
- *Package Design Specifications*
 - *Specifications to guide programmers*
- *Update Project Plan*

1. In-house Development (lanjutan)

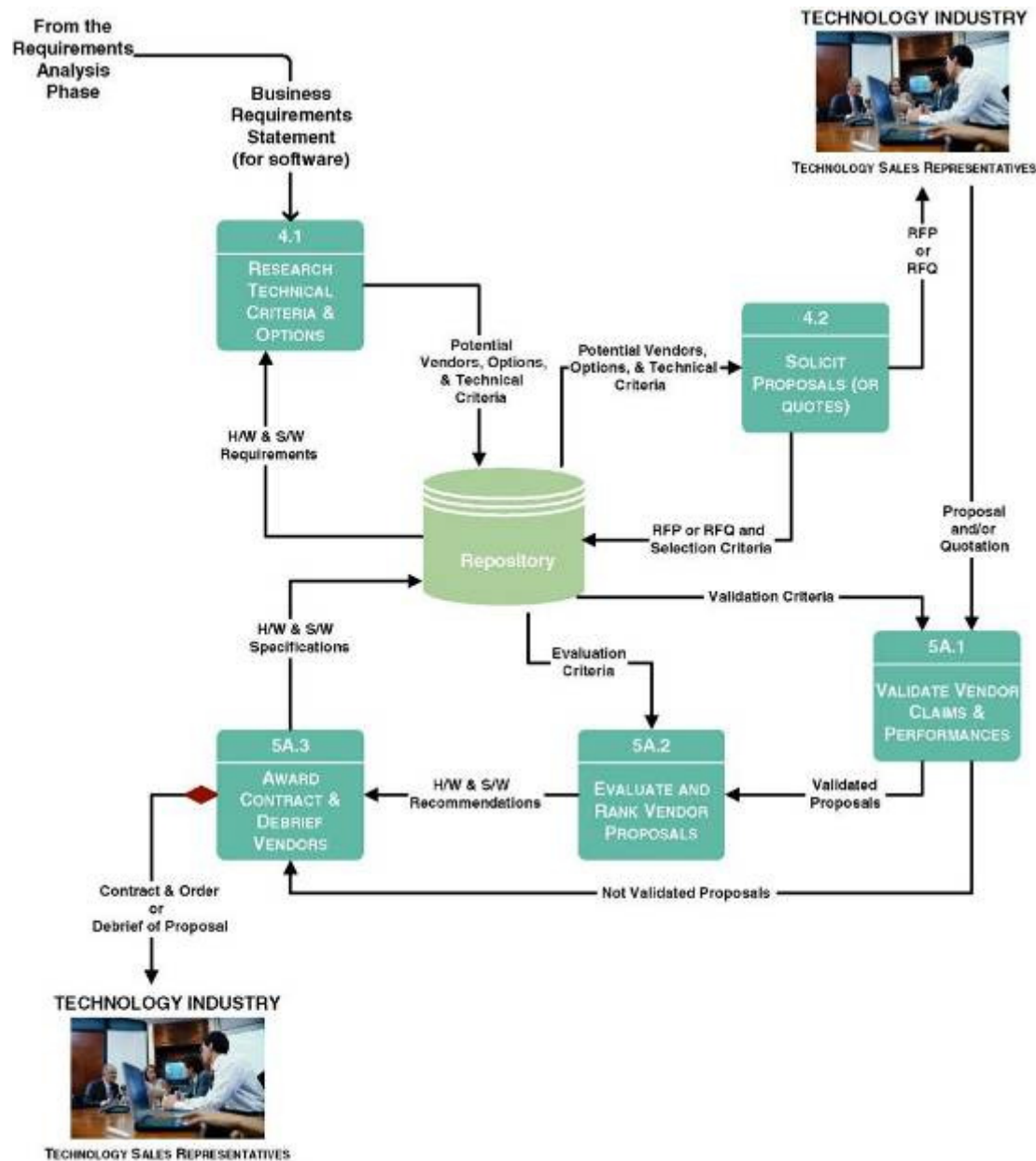


2. Buying Commercial Software

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- Research Technical Criteria and Options
- Solicit Proposals (or Quotes) from Vendors
- Validate Vendor Claims and Performances
- Evaluate and Rank Vendor Proposals
- Award Contract and Debrief Vendors

2. Buying Commercial Software (cont)



2. Buying Commercial Software (cont)

Request for Proposal

- I. Introduction
 - A. Background
 - B. Brief summary of needs
 - C. Explanation of RFP document
 - D. Call for action on part of vendor
- II. Standards and instructions
 - A. Schedule of events leading to contract
 - B. Ground rules that will govern selection decision
 - 1. Who may talk with whom and when
 - 2. Who pays for what
 - 3. Required format for a proposal
 - 4. Demonstration expectations
 - 5. Contractual expectations
 - 6. References expected
 - 7. Documentation expectations
- III. Requirements and features
 - A. Hardware
 - 1. Mandatory requirements, features, and criteria
 - 2. Essential requirements, features, and criteria
 - 3. Desirable requirements, features, and criteria
 - B. Software
 - 1. Mandatory requirements, features, and criteria
 - 2. Essential requirements, features, and criteria
 - 3. Desirable requirements, features, and criteria
 - C. Service
 - 1. Mandatory requirements
 - 2. Essential requirements
 - 3. Desirable requirements
- IV. Technical questionnaires
- V. Conclusion