

IDI Role Definition: **SYSTEMS ANALYST**

Alternative role name: BUSINESS PROCESS ENGINEER

**RESPONSIBILITIES (activities)**

1. Assists current or potential application users in identifying and describing problems or opportunities that might be addressed either:
  - a) by implementing a new (automated or manual) system, or
  - b) by changing an existing application system.
2. Investigates such problems and opportunities to determine the feasibility of a system solution and to identify the general kinds of system solution that appear appropriate.
3. Analyzes users' business requirements in detail and, where appropriate, prepares functional specifications<sup>1</sup> for a proposed new (or changed) system.<sup>2</sup>
4. Assists and guides prospective users of a proposed new or changed system in:
  - a) quantifying the benefits of having the system (or the penalties for not having it), and
  - b) assessing the impact of the system on their organization and on the operation of their business.
5. Obtains rough estimates of the cost of operating and maintaining a proposed new or changed system, assuming use of appropriate technology, tools, and methods.
6. Assists the *project manager*<sup>3</sup> in identifying the skills and resources needed to implement a new system or to modify an existing system, and in preparing rough estimates of:
  - a) the cost of developing or changing the system,
  - b) the duration of a project to do so.
7. Assists the sponsoring users in:
  - a) analyzing the costs, benefits, risks, and return-on-investment of the proposed new system,
  - b) understanding the exact nature of the proposed system,
  - c) deciding whether to proceed with the implementation.
8. Designs and develops users' manuals<sup>4</sup> and corresponding training programs for a system being developed.
9. Prepares, in consultation with users, implementers, and operations representatives, the acceptance (or parallel) test plan for any new or changed system.
10. Assists the users in preparing for the installation and start-up of any new system being implemented.

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<sup>1</sup> Also called *external system design* (ESD) or *detailed user requirements*.

<sup>2</sup> Most courses and textbooks on "Structured Analysis" and "Object-Oriented Analysis" are concerned mainly with this one set of activities.

<sup>3</sup> See separate role definition.

<sup>4</sup> Or equivalent on-line *help* or tutorial documentation.

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### **ACCOUNTABILITY (or results)**

The Systems Analyst will be performing his or her role satisfactorily, with respect to assigned projects, when:

1. Post-implementation project reviews show that the estimated benefit/cost ratios are being met or exceeded by 80% of the systems<sup>5</sup> that are eventually installed. (Resp-4, 5, 6)
2. At least 95% of the systems<sup>5</sup> that turn out not to be justified are abandoned before significant effort is spent on implementation. (Resp-7a)
3. Users of new or changed systems are fully aware before installation of:
  - a) exactly what the new system will do, (Resp-7b)
  - b) their own responsibilities toward successful implementation, (Resp-9)
  - c) any difficulties or negative effects of the system (Resp-4b).
4. Proposed functional specifications<sup>1</sup> are based upon:
  - a) a thorough and largely correct understanding of the users' business needs (Resp-3)
  - b) all applicable company standards (Resp-3),
  - c) appropriate, up-to-date technology (Resp-2).
5. Non-trivial *bugs* in systems that have been tested according to agreed-upon test plans occur no more than once in 10000 transactions.<sup>5</sup> (Resp-9)
6. User management complains that a new system is hard to use or hard to learn in fewer than one project in ten.<sup>5</sup> (Resp-8, 10)

### **AUTHORITY**

In order to accomplish his or her functions, the Systems Analyst may, without additional authorization:

1. Communicate informally and in writing with the sponsoring users and affected people in the user's organization.
2. Delegate tasks to subordinate members of the project team.
3. Request services from other parts of the company, subject to the limitations of the project budget.
4. Decline to undertake activities in support of implementing systems that appear to be infeasible or clearly unjustified (except where management specifically directs that the work be done on a "best effort" basis).
5. Decline to support implementing systems for which the user does not fully understand the functional specification, the benefits, and the estimated costs (except where management specifically directs that the work be done on a "best effort" basis).
6. Examine relevant materials relating (a) to previous or current systems to be replaced and (b) to other systems that may have an interface to the proposed system.
7. Obtain and store actual ("live") data for testing, subject to security and confidentiality regulations..
8. Decline to concur in the production installation of a system for which either no adequate test plan exists or the test plan has not been followed.

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<sup>5</sup> These quantitative measures are adjusted, of course, to suit the environment of a particular organization.