



# Software Project Team Composition

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# 2

## Software Development Project Roles and Responsibilities

<https://www.atlascode.com/blog/software-development-project-roles-and-responsibilities/>

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- Project Sponsor
- Subject Matter Experts (SME)
- Product Owner
- Project Manager (PM)
- Technical Lead
- Software Developers
- Software Testers
- User Acceptance Testers



# 3

## Project Sponsor

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- person or group that provides direction and resources, including financial resources for the software project
- works with the project management team, aiding with wider project matters such as scope clarification, progress, monitoring, and influencing others in order to benefit the software project
- leads the project through the software supplier selection process until it is formally authorized
- may also be involved in other important issues such as authorizing changes in scope, phase-end reviews, and go/no-go decisions when the stakes of the project are particularly high
- sponsors of projects tend to be senior management or director level executives



# 4

## Subject Matter Experts (SME)

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- Also called a Domain Expert
- a person who is an authority in a particular area or topic
- has superior (expert) knowledge of a discipline, technology, product, business process or entire business area
- the people from whom technical requirements are captured
- Non-technical people: accountants, finance controllers, salespeople, production managers
- one of the ways to get them involved is to have them contribute to the creation of early stage wireframes and prototypes



# 5

## Product Owner (1)

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- a software development role for a person who represents the business or end-users
- responsible for working with the user group to determine what features will be in the product release
- responsible for the prioritized backlog and maximizing the return on investment (ROI) of the software project
- documenting user stories or requirements for the software project
- act as the main point of contact for all decisions concerning the project





# 6

## Product Owner (2)

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- ensures that the software product vision statement is adhered to
- makes the final decision on all scope related decisions
- maintains and updates the product backlog on a continuous basis by
  - refining new requirements
  - removing requirements that fall out of scope
  - adding new requirements identified as being required to achieve the software product vision statement
  - reviewing and setting the priorities assigned to the product backlog and heading up all project planning meetings
- resolves any disputes either with the software development team or internally



# 7

## Project Manager (PM) (1)

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- responsible for knowing the “who, what, where, when and why” of the software project
- must know the stakeholders of the project and be able to effectively communicate with each of them
- responsible for creating and managing the project budget and schedule as well as processes including
  - scope management
  - issues management and
  - risk management
- must exercise change management once deliverables are defined



# 8

## Project Manager (PM)(2)

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- Other duties:
  - Developing a software project plan
  - Manage deliverables according to the software project plan
  - Recruiting software project staff
  - Leading and managing the software project team
  - Determining the methodology used on the project
  - Establishing a project schedule and determine each phase
  - Assigning tasks to project team members
  - Providing regular updates to senior management





# 9

# Technical Lead

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- the development team leader
- works with the developers to provide technical details and estimates for the proposed solution
  - This information is used by the Project Manager to create the Statement of Work and the Work Breakdown Structure documents for the software project
  - Must effectively communicate the status of the software project to the Project Manager so that issues or variances can be effectively addressed as soon as possible
- translates the business requirements into a technical solution
- must be involved in the planning phase to hear the business requirements from the customer's point of view and ask questions
- responsible for establishing and enforcing standards and practices with the software development team



10

# Software Developers (front-end and back-end)

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- responsible for using the technical requirements from the Technical Lead to create cost and timeline estimates
- responsible for building the deliverables and communicating the status of the software project to the Technical Lead or Project Manager

# Software Testers (1)

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- ensure that the software solution meets the business requirements and that it is free of bugs, errors and defects
- should review and contribute to test plans, as well as be analyzing, reviewing and assessing technical requirements and design specifications during the test planning and preparation phases of the software testing
- involved in identifying test conditions and creating test designs, test cases, test procedure specifications and test data, and may automate or help to automate the tests

*As test execution begins, the number of testers **often increases**, starting with the work required to implement tests in the test environment*

- Some duties of software testers include:
  - setting up the test environments or assist system administration and network management staff in doing so
  - executing and logging the tests, evaluating the results and documenting problems found
  - monitoring the testing and the test environment, often using tools for this task, and often gather performance metrics
  - reviewing each other's work, including test specifications, defect reports and test results throughout the software testing life cycle



# 13

# User Acceptance Testers

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- perform the final checks to ensure that the software works for the business across several real-world scenarios
- Subject Matter Experts make excellent User Acceptance Testers

*User Acceptance Testing (UAT) is the final step prior to a new software solution being released to production (live)*

14

# Additional Roles

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BUSINESS ANALYST



QUALITY ASSURANCE  
MANAGER



SOFTWARE  
ARCHITECT



DATABASE  
ADMINISTRATOR





# 15

# Business Analyst

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- primary objective: *helping businesses implement technology solutions in a cost-effective way by determining the requirements of a project or program, and communicating them clearly to stakeholders, facilitators and partners*
- typically take the lead role in:
  - Assisting with the business case
  - Planning and monitoring
  - Eliciting requirements
  - Requirements organization
  - Translating and simplifying requirements
  - Requirements management and communication
  - Requirements analysis



# 16

## Quality Assurance Manager (typical responsibilities) (1)

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- determining, negotiating and agreeing on in-house quality procedures, standards and specifications
- assessing customer requirements and ensuring that these are met
- setting customer service standards
- specifying quality requirements of raw materials with suppliers
- investigating and setting standards for quality and health and safety
- ensuring that manufacturing processes comply with standards at both national and international level
- working with operating staff to establish procedures, standards, systems and procedures



17

## Quality Assurance Manager (typical responsibilities) (2)

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- writing management and technical reports and customers' charters
- determining training needs
- acting as a catalyst for change and improvement in performance and quality
- directing objectives to maximize profitability
- recording, analyzing and distributing statistical information
- monitoring performance
- supervising technical or laboratory staff

# Software Architect (1)

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- a software expert who makes high-level design choices and dictates technical standards, including software coding standards, tools, and platforms
- the leading expert is referred to as the **chief architect**
- most important responsibility is *complete technical support* of the project from the moment of inception, through product release, to development of enhancements
- Other responsibilities:
- Identifying business requirements and requirements of the stakeholders on the project
  - Designing the entire system based on the received requirements
  - Choosing the system architecture and each individual component of this system at a high level



# 19

## Software Architect (2)

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- Choosing the technologies for the implementation of each component and connections between the components
- Architectural review
- Code-review
- Writing project documentation and its support
- Creating unified development standards in the company
- Controlling the architecture during the next iteration of the system release

# Database Administrator (1)

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- primary job is to ensure that data is available, protected from loss and corruption, and easily accessible as needed
- Some chief responsibilities
  - Software installation and Maintenance
  - Data Extraction, Transformation, and Loading
  - Specialized Data Handling
  - Database Backup and Recovery
  - Security
  - Authentication





# 21

# Database Administrator (2)

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- Capacity planning
- Performance monitoring
- Database tuning
- troubleshooting



# End of Presentation

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