PROJACS ACADEMY
by egis

Advanced ArcGIS Project Management

البرنامج التدريبي المتقدم في إدارة مشروعات نظم المعلومات الجغرافية ArcGIS

17 – 21 December 2023

Cairo / Egypt

Introduction

In last decade computer systems which can handle large amount of geographic information have become sufficiently powerful and inexpensive to be used on a wide scale.

GIS is the fastest growing segment (both hard & software) of the graphical computer market.
70% of private organizations expect to use GIS at a strategic tool within their company.

GIS in an organization has a life cycle starts with awareness and ends when full integration with other information systems is achieved.

Strategic GIS projects require a project manager with through understanding of issues such as planning, knowledge of the project objectives, project environment and politics.

Objectives

By the end of this course participants shall learn to:

1. Gain knowledge in managing a GIS Project in all its phases: User Needs Survey, Needs Assessment, Database Design, System Design, Data Conversion, Application Development, and Training.
2. Get hands on experience in managing a GIS project.
3. Acquire all skills needed to prepare GIS project documentation such as request for proposal, and various project deliverable documentations.
4. Better understand the issues of staffing and budgeting, team work, and consultant-client relationship through real world case studies.

Who Should Attend?

- Managers interested in getting hands on experience in managing GIS projects.
- Leaders looking towards bridging the gap in the digital divide and managing in the modern information age.
- Individuals looking ahead to become GIS managers or GIS coordinators.
- Potential implementers of GIS solutions:
  1. Public sector agency staff (Governmental, Institutional)
  2. Private sector staff (Consultants, Contractors, Marketers)
  3. Educational sector staff (Educators, Academicians, Researchers)

Course Outline

Day One

Biding a GIS project

1) **Introduction**
   Course objectives, GIS application fields, GIS benefits, Consideration of GIS implementations, Symptoms of GIS projects, Project failure, Understanding GIS life cycle, Life cycle of IT system/ IT project, strategic position of GIS, flow of funds, information needs, information triangle for GIS.
2) **Understanding And Formulating a Typical Request For Proposal (Rfp)**
   Primary objectives of RFP, Structure of RFP, Background and Project Information, needs assessment, Conceptual system design, Implementation plan, Final presentation, Additional Information, Format of Receiving responses to RFP Proposal, Important dates, Selection criteria, Evaluating proposals, Common evaluation procedure.
3) **Initiating The Formal Negotiation Process**
   Negotiating Process, Initiating the Formal Negotiation Process, negotiate a contract, memorandum of understanding with the Client/Partner Organization, formal contract included information.
4) **Practical Training (1)**
   - Opening ArcGIS program
   - Identifying program window
   - Insert maps
   - Georeferencing and projection
   - Establish geodatabase

Day Tow

Writing a Proposal and Winning the Project

1) **Preparation of GIS Project Proposal**
   Writing a GIS project proposal, GIS Organizational Structure and Staffing, Staffing objectives, models of GIS Staff, General Rules of Staffing, GIS Infrastructure, GIS Organizational Evolution, Traditional GIS Organizational Structure, Responsibilities of a policy/steering committee, Project Budgeting, Defining Project Costs, Cost Budgeting, Attributes of a Good Budget, GIS Technical Coordination Committee, Responsibilities of the technical coordination committee.
2) **Project Schedule**
   Definition of project schedule, scheduling concepts, Building the project schedule, Scheduling problems.
3) **Practical Training (2)**
   - Creating GIS layers by digitizing
   - Topology

- Data Editing
- Build and Clean
- Data input in attribute tables
- Display labels on objects
- Browse and Inquire data

Day Three

Implementing the Project

1) **Training**
   Types of training, commonly used terminology in training, Basics of Training, Systematic Approaches
2) **Implementing The Project**
   Setting Milestone, Project Management, project stages, start of GIS project, Project Organization, Project Sponsor, Project managers responsibilities, Responsibilities of the Project manager, Managing Personnel, adopting Technology (Responsibilities of the stage manager, knowledge base, qualifications of project managers), Project Management Skill Sets, Crucial areas of planning for project managers, Project Initiation Document (PID), Acceptance Plan, Work Breakdown Structure, Kick-off meeting, Project Management Software, Matrix of Common Project Risks. Sample Work Breakdown Structure, Tackling Problems and Setting Expectations.
3) **Practical Training (3)**
   - Field calculator
   - Tabular analysis (Statistics, data summarizing, Queries)
   - Spatial analysis (Buffer generation, spatial Queries)

Day Four

Evaluation and Documentation

1) **Evaluation**
   Reasons GIS Fail, GIS Implementation Management, Evaluation and Documentation, Characteristics of good report, Final products, final deliverables
2) **Documentation**
   Structure of Project Report, Future planning
3) **Practical Training (4)**
   - Measure distances
   - Layouts View

Day Five

Project Examples and Demos

1) **Facility management**
   Spatial Database Basics, Spatial Databases Background, Types of Data Stored in Spatial Databases, Spatial Databases Uses and Users, Spatial Database Management System, Spatial Query Language, Spatial Query Language Operations, Spatial Data Entity Creation, Example Spatial Query
2) **Case Study**

Training Method

- Pre-assessment
- Live group instruction
- Use of real-world examples, case studies and exercises
- Interactive participation and discussion
- Power point presentation, LCD and flip chart
- Group activities and tests
- Each participant receives a 7” Tablet containing a copy of the presentation, slides and handouts
- Post-assessment

Program Support

This program is supported by interactive discussions, role-play, case studies and highlight the techniques available to the participants.

Schedule

The course agenda will be as follows:

- Technical Session 08.30-10.00 am
- Coffee Break 10.00-10.15 am
- Technical Session 10.15-12.15 noon
- Coffee Break 12.15-12.45 pm
- Technical Session 12.45-02.30 pm
- Course Ends 02.30 pm

Course Fees*

- **3,200 USD**
  **VAT is Excluded If Applicable*

المقدمة

في العقد الماضـــي، أصـــبحت أنظمة الكمبيوتر التي يمكنها التعامل مع كمية كبيرة من المعلومات الجغرافية قوية وغير مكلفة بما يكفي لاستخدامها على نطاق واسع. تعد نظم المعلومات الجغرافية هي القطاع الأسرع نموًا (سواء كان ذلك في الأجهزة أو البرامج) في سوق أجهزة الكمبيوتر البيانية. تتوقع ٧٠٪ من المؤسسات الخاصة استخدام نظم المعلومات الجغرافية كأداة استراتيجية داخل شركاتهم.

نظم المعلومات الجغرافية في المنظمة لها دورة حياة تبدأ بالوعي وتنتهي عند تحقيق التكامل الكامل مع أنظمة المعلومات الأخرى. تتطلب مشاريع نظم المعلومات الجغرافية الإستراتيجية مدير مشروع يتمتع بفهم لقضايا مثل التخطيط ومعرفة أهداف المشروع وبيئة المشروع وسياساته.

الأهداف

بنهاية هذه الدورة سيتعلم المشاركون ما يلي:

- اكتســاب المعرفة في إدارة مشــروع نظم المعلومات الجغرافية في جميع مراحله: مســح احتياجات المستخدم، وتقييم الاحتياجات، وتصميم قواعد البيانات، وتصميم النظام، وتحويل البيانات، وتطوير التطبيقات، والتدريب.
- الحصول على خبرة عملية في إدارة مشروع نظم المعلومات الجغرافية.
- اكتســاب جميع المهارات اللازمة لإعداد وثائق مشــروع نظم المعلومات الجغرافية مثل طلب العرض، ومختلف وثائق تسليم المشروع.
- فهم أفضل لقضايا التوظيف والميزانية، والعمل الجماعي، والعلاقة بين المستشار والعميل من خلال دراسات الحالة في العالم الحقيقي.

الحضور

- المديرين المهتمين بالحصول على خبرة عملية في إدارة مشاريع نظم المعلومات الجغرافية.
- قادة يتطلعون إلى سد الفجوة الرقمية والإدارة في عصر المعلومات الحديث.
- الأفراد الذين يتطلعون إلى أن يصبحوا مديرين لنظم المعلومات الجغرافية أو منسقي نظم المعلومات الجغرافية.
- المنفذون المحتملون لحلول نظم المعلومات الجغرافية:
  - موظفو هيئات القطاع العام (الحكومية، المؤسسية)
  - موظفو القطاع الخاص (استشاريون، مقاولون، مسوقون)
  - العاملون في القطاع التعليمي (التربويون، الأكاديميون، الباحثون)