



# ArcGIS for Mobile Platforms

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# Agenda

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- **Mobile Positioning**
- **Applications**
  - Rugged Platforms
  - Smartphone Platforms
- **Runtime SDKs**
  - Rugged Platforms
  - Smartphone Platforms
- **Mobile Road Map**

# Mobile Technology for the Knowledge Worker

- **Field Operational Needs**
  - Replace Paper Map Books
  - Regulatory Compliance
  - Asset Maintenance
  - HSE Preparedness
- **Strategic Needs**
  - Situational Awareness
  - Production Trends
  - Land Lease Management
- **Constituent Engagement**
  - Public Relations Viewer
  - App Stores



# What are the benefits of mobile GIS?

Leverages the investment of your enterprise GIS

- **Improve Efficiency and Accuracy of Field Operations**
- **Rapid Data Collection and Seamless Data Integration**
- **Enables free flow of information between devices/desktops**
- **Helps to Make Informed and Timely Decisions**

# Esri Mobile Technologies

Mobile capabilities of the ArcGIS system

Apps and APIs

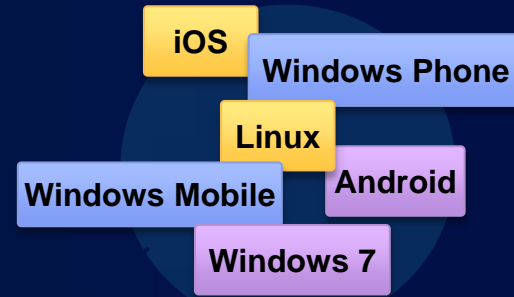


Form Factors



ArcGIS  
mobile

Platforms



Functionality  
(Mobility Services)



# Mobile Applications

*ArcGIS running on ...*

Windows Mobile

Windows



Rugged and Embedded Devices

Android

iOS

Microsoft  
Windows Phone



Smartphones and Tablets



# ArcGIS on Rugged Devices

## *Windows and Windows Mobile Devices*

- Designed for harsh field conditions
- One handed/vehicle-mounted use
- Occasionally connected workflows
- High accuracy data collection
  - GPS integration
  - Laser integration
- Replace Paper Surveys
  - Intelligent forms
  - Barcode integration



Land Management

Water Facilities Mapping

Asset Maintenance/Inspection

Emergency Operations

Service Requests

# ArcPad 10

- Mobile lightweight GIS Application
- Focused on field data collection
- Targets GIS professional in the field
- Synced with ArcGIS 10 release
- Offline data use
- Related Tables support





# ArcPad 10.0.4

- **ArcPad 10.0.4**
  - **ArcPad Extension for ArcGIS Server**
    - Fix for synchronization problem
  - **\$GPGST NMEA sentence support**
    - Populates EPE, HPE, VPE fields in GPS position window
  - **AXF file & field name support for non-English language**
    - Requires FME Desktop 2012 from Safe Software

# ArcGIS Mobile on Rugged Devices

## Application

- Rapid Deployment of Maps, Apps & Projects
- Task-based, Workflow Driven User Experience
- Synchronization of Data between Field & Office
- Full Offline Support



## API

- Coarse-grained .NET API
- Build focused, custom solutions
- Extend COTS application

## Data

- StreetMap Data Package
- North America/Europe

## Platforms

- Windows XP, Vista, Windows 7
- Windows Mobile



# ArcGIS for Windows Mobile Capabilities

## Field Application:

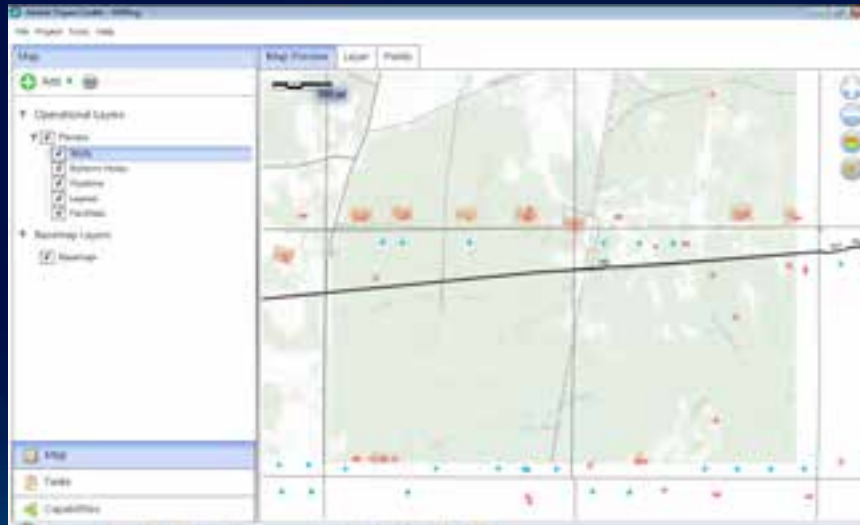
- Configurable Workflows
- View and Identify Features
- Adhoc/Pre-defined queries
- GPS Data Collection
  - High Accuracy Collection
- Forms Centric Editing
  - Field Validation
  - Auto-populate values
  - Repeat feature collection
- Feature Editing (Shape and Attributes)
- Feature Attachments
- GPS Logging
- User Identity



# Mobile Project Management

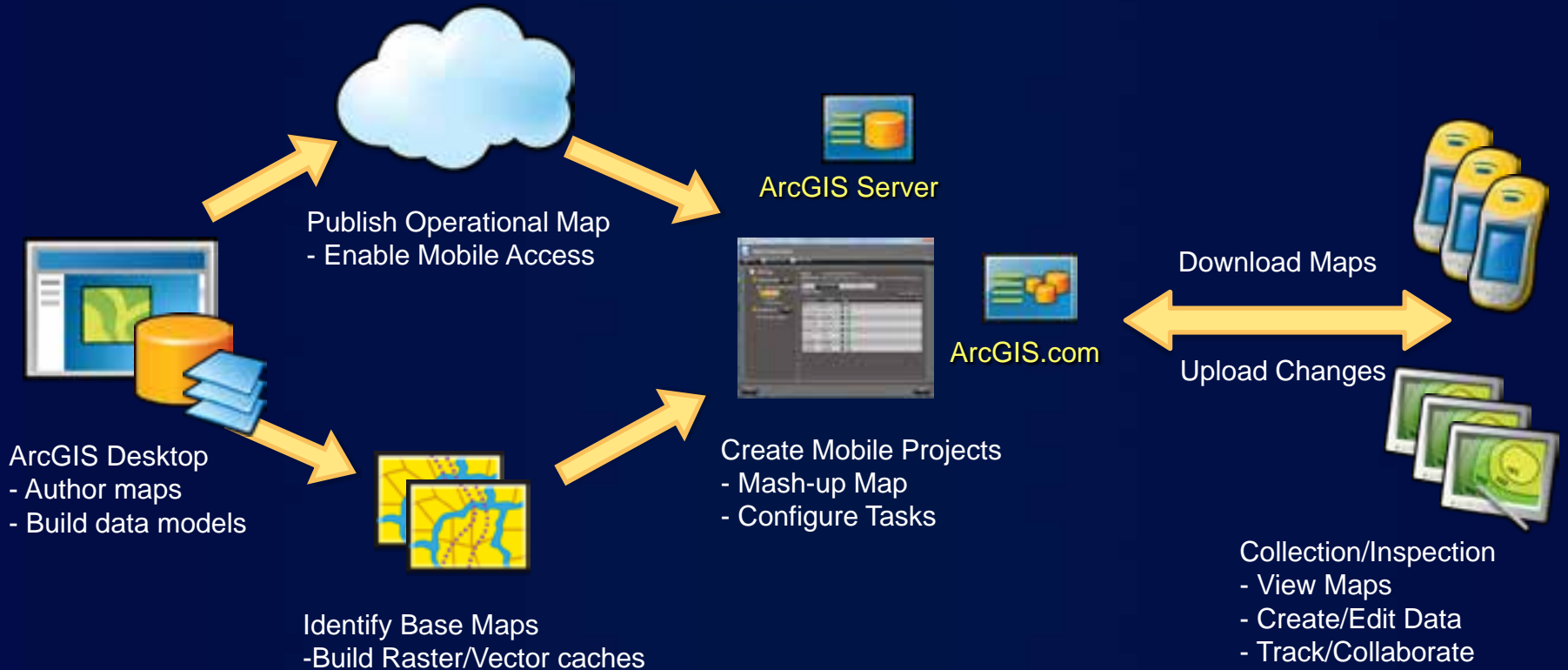
## Mobile Project Center

- **Create & Manage Field Applications**
- **Configure workflows and data**
- **Publish and share maps & content**
  - Local
  - On-Premise Server
  - Cloud



# Deployment & Field Workflow

## Scalable Server-centric deployment



# Trimble Positions Toolkit

- **Enhances ArcGIS Mobile data collection capabilities**
  - Sub-meter accuracy
  - Applies estimated accuracy to features during collection
  - GeoExplorer series devices only
- **Initial release (SDK only)**
  - Trimble GPS construction methods
  - Post-processing capability
- **July release (SDK and Apps)**
  - Application extension (Windows Mobile)
  - Support for RTC





# ArcGIS on Smartphones and Slates

iOS, Windows Phone and Android Devices

- Designed for touch-screen phones
- One handed use
- Connected Workflows (Wifi, 3G)
- Assisted-GPS Integration
- Replace Paper Surveys
  - Intelligent forms
  - Field Validation
  - Media Integration

Emergency Operations

Service Requests

Parcel Valuation

VGI

Campus Maps



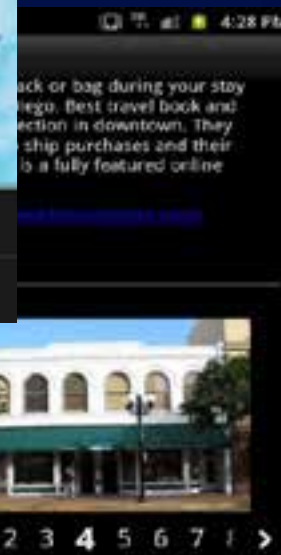
# ArcGIS for iOS

- **Universal Application**
- **Works with maps:**
  - ArcGIS Online
  - On Premise Content Server
- **Capabilities:**
  - Role-based
  - View Maps...
  - Secured Services
  - Data Collection
  - Search, Bookmarks
  - Sharing
- **Next Release:**  
**Portal, Organizations, Hosted Services**



# ArcGIS for Android

- **Works with maps:**
  - ArcGIS Online
  - On Premise Content Server
- **Capabilities:**
  - Role-based
  - View Maps...
  - Data Collection
  - Search
- **Next Release:**  
**Portal, Organizations, Secured Services, Hosted Services**



# ArcGIS for Windows Phone

- **Works with maps:**
  - ArcGIS Online
  - On Premise Content Server
- **Capabilities:**
  - Role-based
  - View Maps...
  - Secured Services
  - Data Collection
  - Search, Bookmarks
  - Sharing
- **Next Release:**  
**Portal, Organizations**





# Runtime SDKs



# Native Runtime SDKs

**Windows Mobile**

**Windows**

**Linux**

**iOS**

**Android**

**Windows Phone**

**Runtime SDK**

- .NET CF

**Runtime SDK**

- WPF, Java

**Runtime SDK**

- Java, Qt

**Runtime SDK**

- Objective C

**Runtime SDK**

- Java

**Runtime SDK**

- Silverlight



Rugged and Embedded Devices

Smartphones and Tablets



# ArcGIS for iOS SDK

- iOS development using Objective C language
- Build focused mapping applications
- Embed ArcGIS into existing LOB apps



XCode

- **June Release:**
- Portal API with support for ArcGIS Online Organizations
- Hosted Services
- More Open ArcGIS Online Formats (WMS, .CSV)
- **Fall Release:**
- Disconnected editing/offline caches
- 10.1 server capabilities



# ArcGIS for Android SDK

- Java development using Eclipse 3.5+ or higher
- Build focused mapping applications
- Embed ArcGIS into existing LOB apps



Eclipse

- **June Release:**
- Portal API with support for ArcGIS Online Organizations
- Hosted Services
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## Fall Release:

- Disconnected editing/offline caches
- 10.1 server capabilities
- More Open ArcGIS Online Formats (WMS, .CSV)



*Requires Android 2.2 API 7 and higher*

# ArcGIS API for Windows Phone

- Silverlight development using Visual Studio 2010 (Windows Phone SDK download)
- Build focused mapping applications
- Embed ArcGIS into existing LOB apps

## June Release

- Secured Services, Localization, Portal/Organizations

## Fall Release

- Server 10.1 services support





# Road Map for Mobile

# ArcPad Road Ahead

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- **ArcPad 10.1**
  - To be released shortly after ArcGIS 10.1
  - Continue to support Windows & WM
  - Improved performance/Stability

# ArcGIS for Windows Mobile Plans

- **3.0.1 Release (July/August)**
  - Bug fixes
  - Native camera support for Windows Tablet
  - Improved GPS library
  - Improved support of datum transformations
- **3.1 Release (Fall)**
  - Tablet equivalency with handheld
  - Full StreetMap routing and geocoding support
  - Laser Range Finder integration
  - “Related Feature auto-populate values”
- **4.0 Release**
  - Feature Service/Feature Cache
  - Related Tables
  - Ad-hoc data collection



# ArcGIS for Smartphones and Tablets

- **June Release**
  - ArcGIS Online subscriptions/portal integration
  - Hosted Services support
  - Secured Services (Android)
- **Fall Release**
  - Equivalency between mobile platforms and ArcGIS Online
  - Connected Routing in application
- **Winter Release**
  - Complete offline support
  - Related Tables support

**Questions**