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Office of Enabling Technologies

The Impact of Mobile Technology at the University of Michigan Medical School

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Technologist

1/20/12

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Agenda

- Medical School Background
- Mobile Devices in the Health System
- What kinds of mobile apps being developed?
- Mobile Apps from UMMS/UMHS
- Supporting App Development
- Engagement

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UM Medical School

Total Faculty	2,828
Staff	3,760

- Instructional Focus
- Research Focus
- Clinical Focus

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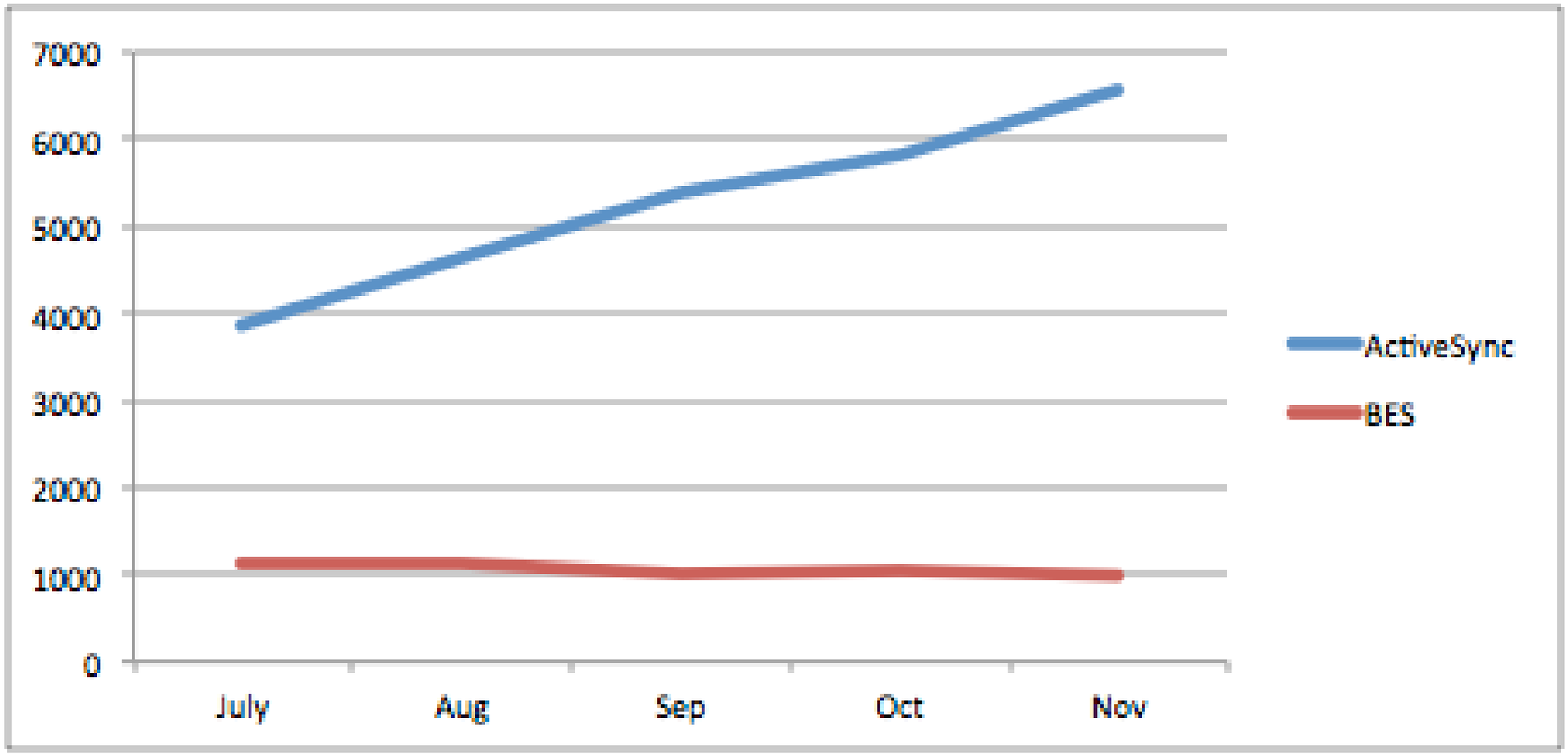
Mobile Devices within UMHS

iPhone/iPad	2,009
Android	1,076
Blackberries	999
total	4,084

Wireless Device attachements
November 2011

Exchange & BES



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Mobile Device Deployments

- 200 iPads purchased by Anesthesiology for faculty and residents (clinical web app and education resources)
- iPad pilot with Neurosurgery Department (30 devices). Access to Centricity Nursing via Citrix client app.
- M1/M2 students arriving at UMMS with iPads and asking for education resources to be delivered on that platform
- Installed base of Blackberry devices a major challenge to be considered when developing mobile apps - especially web-based apps

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Administrative applications

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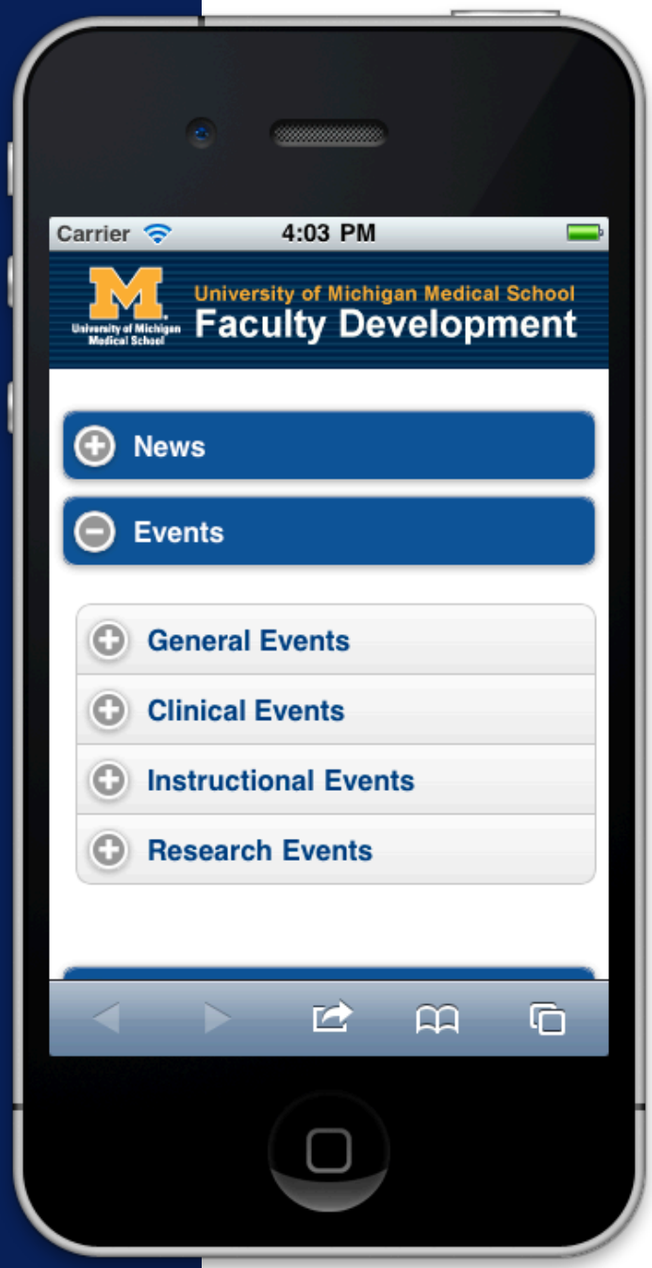
Faculty Development News & Events



- Delivers News, Events, Resources
- Supports registration, Mailing list signup
- Backend database administration
- Web application
- Developed by Enabling Technologies

Faculty Development Admin Application

News Items

News Item	News Date	News to Date	News Item Description	Action
Smart phone application now available	09-20-2011	09-30-2011	A smart phone web based application has been developed to make Faculty Development information more accessible. http://m.umms.facultydevelopment.org	Edit Delete

New News Item

Events

Event Name	Event Date	Event Description	Action
Scientific Writing Workshop Registration URL	12-06 & 12-07-2011	This workshop will focus on navigating scientific writing and scientific publishing. Please note that we have added an extra date. December 6 from 11:30 a.m. - 4:30 p.m. in Danto Auditorium December 7 from 7:30 - 11:30 a.m. in BSRB Seminar Rooms	Edit Delete Participants
Linkages Leadership Pilot Program Registration URL	11-30-2011	Linkages will be providing a leadership development pilot program at the University of Michigan for selected invitees. This is a 3 day program. This program is filled, but names may be submitted for the waitlist.	Edit Delete Participants
Clinical Teaching - How to give effective Feedback to the learner. Registration URL	11-29-2011	Drs. Hopson and Mullan will be presenting information to develop effective feedback techniques. Please note the date of this event has changed. It will be held in Danto Auditorium from Noon - 1:00 p.m.	Edit Delete Participants
Stress Free Living for Happiness and		Dr. Aditi Dave, Internal Medicine Hospitalist, will be presenting on how to manage stress and its effects, increase mental clarity and	

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M.D.Stat+

- Co-Developed by Application & Information Services Group & Enabling Technologies
- Thin native IOS app for iPhone/iPad
- Local Notifications of status changes

581

304

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Orange Card Replacement

- Web application
- Developed by MSIS Application & Information Services Group

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Education applications

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Second Look Series

- Converter for Powerpoint Slides
- Native app for Tablets - iOS & Android
- In-app purchase of additional slide decks
- Developed by Enabling Technologies

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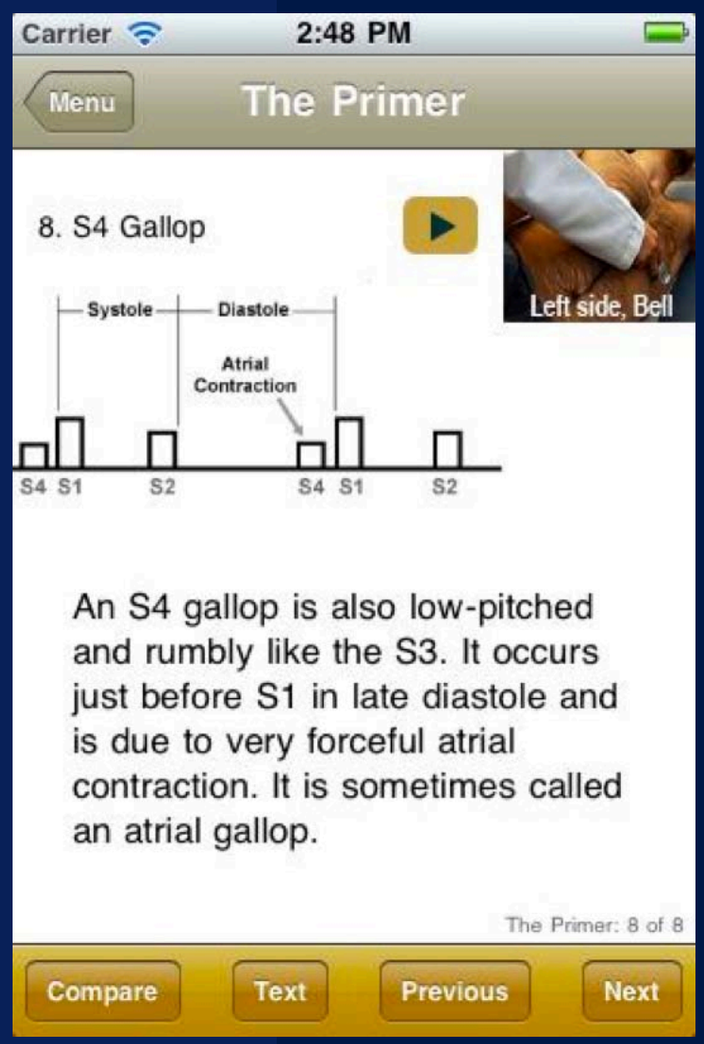
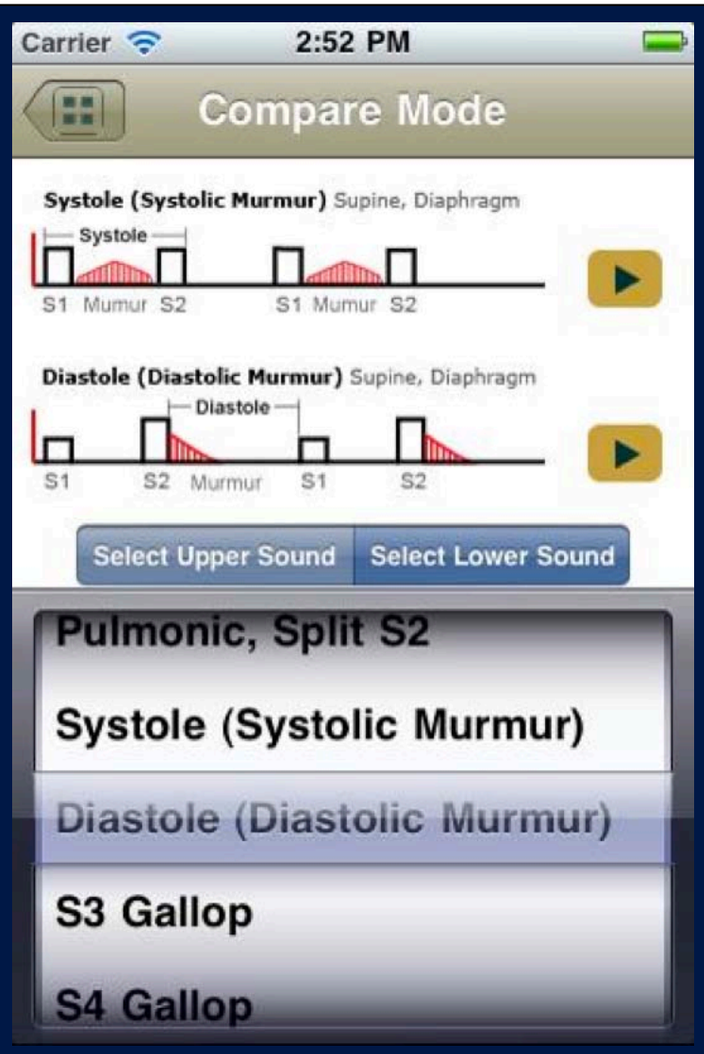
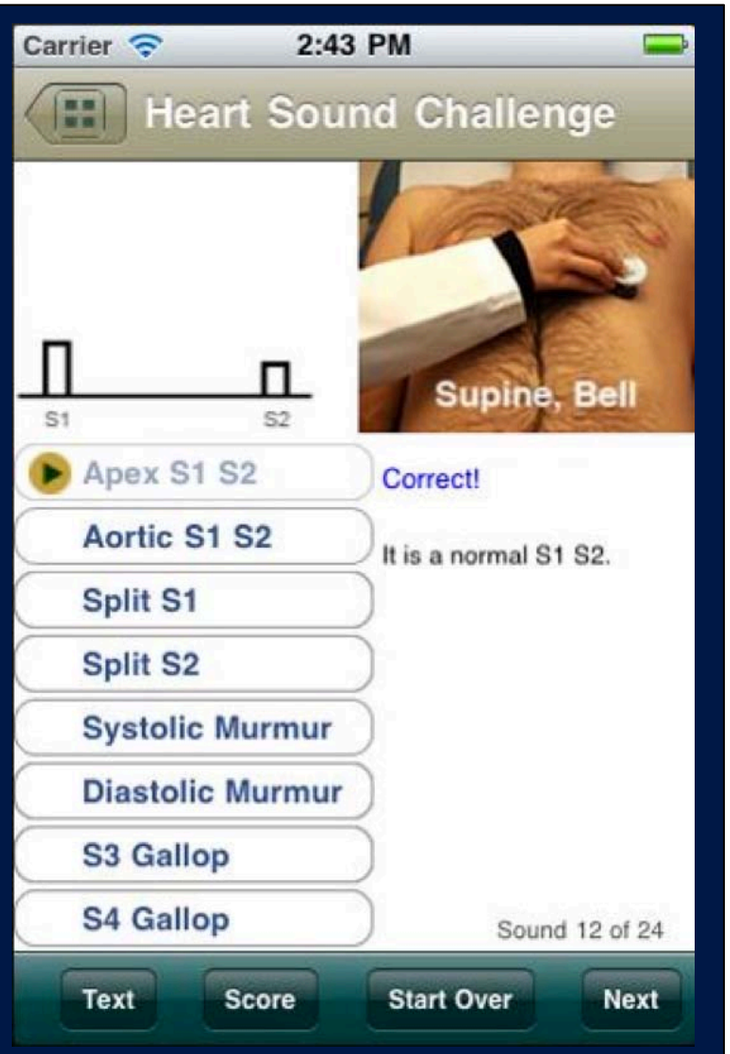
Heart Sounds Challenge







- Developed by Multimedia Development
- Released IOS app for iPhone/iPad

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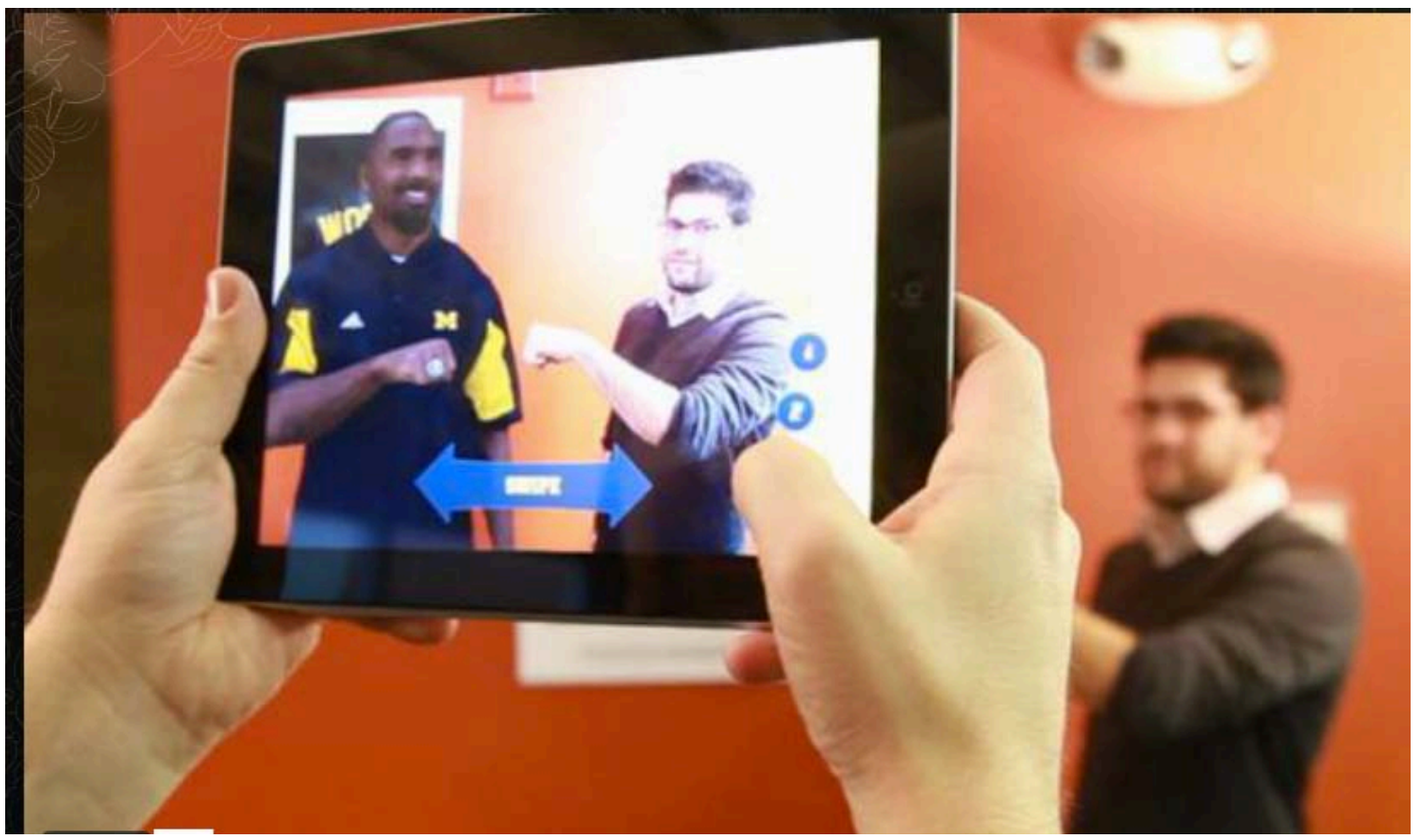
3D Woodson

- New 3D technology brings Woodson, a long-time Mott supporter, to life in new hospital lobby
  - http://www.uofmhealth.org/news/3d-woodson-app-1031
- Bully Entertainment
  - http://www.bullyentertainment.com



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Clinical application examples

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MiSkinCheck

- Developed for the UMHS Destinations Program by MSIS - Enabling Technologies
- First Release for iPhone/iPad, then for Android

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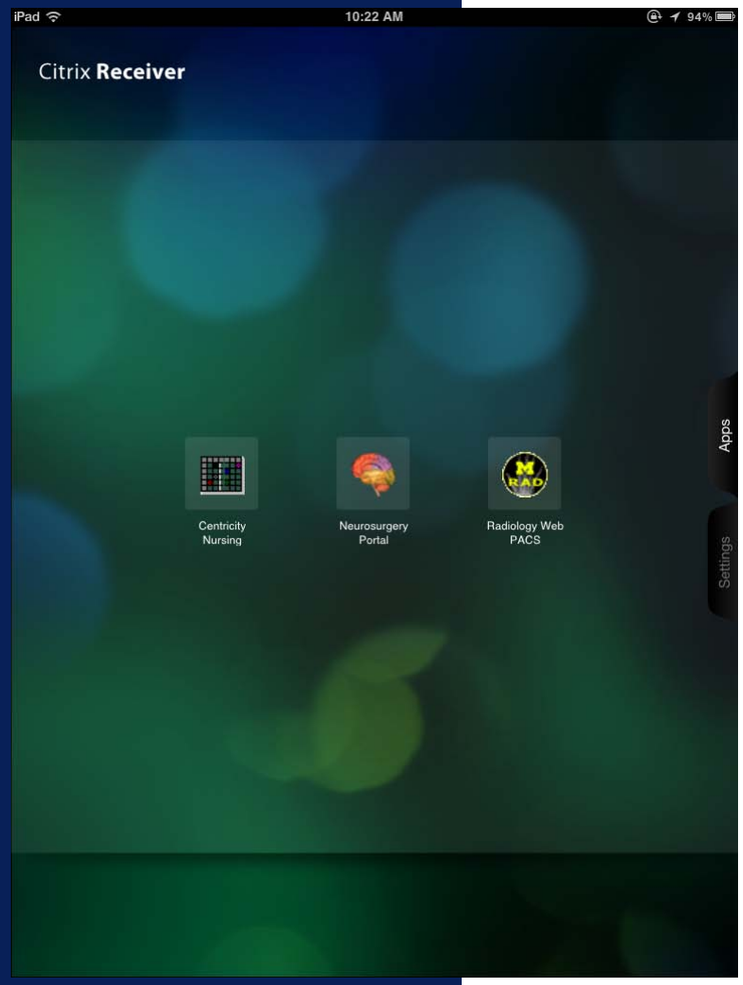
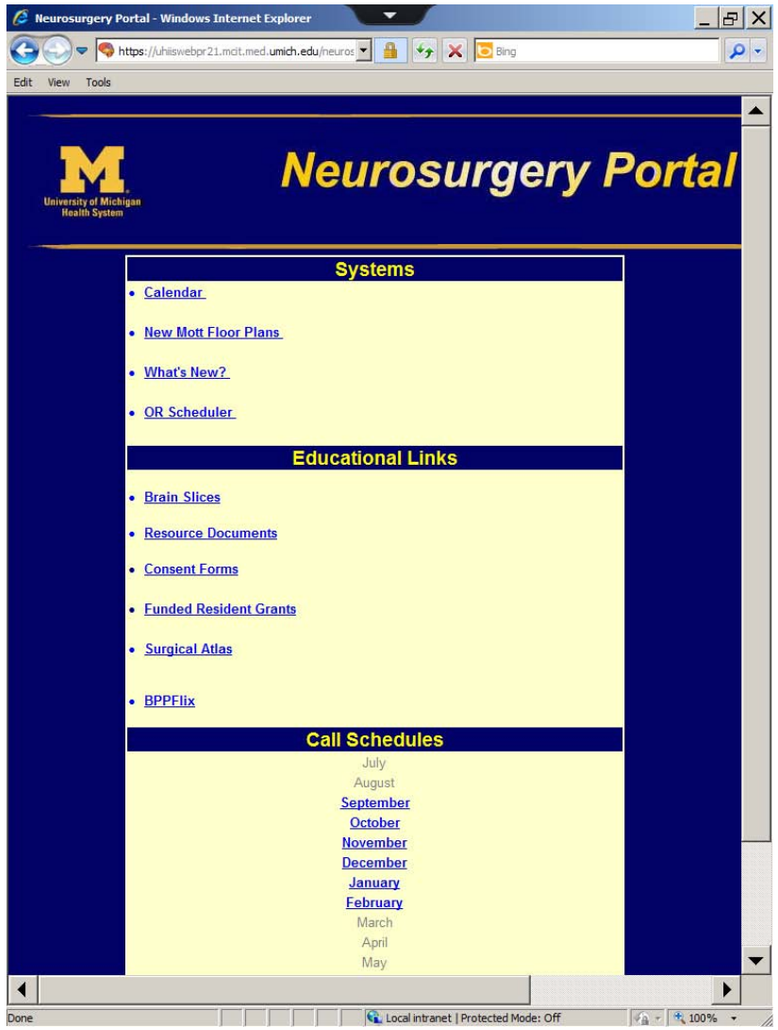
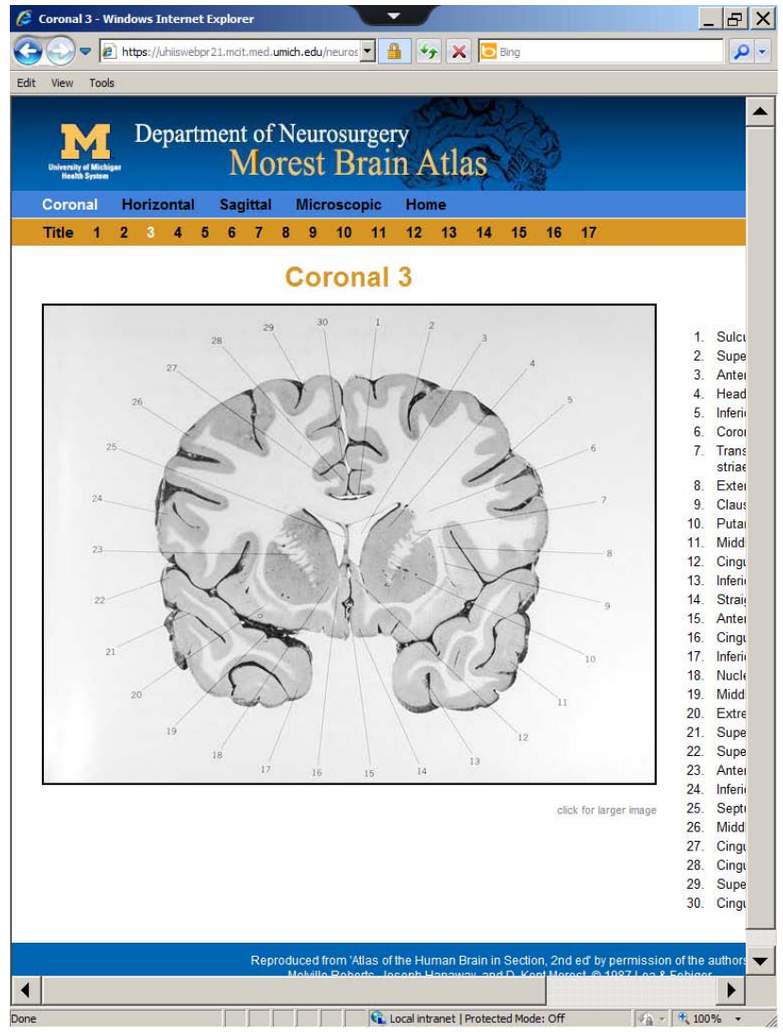
Citrix Receiver







- NeuroSurgery iPad Pilot
- Citrix Receiver to access core clinical Windows-based web applications
- Health System IT Pilot

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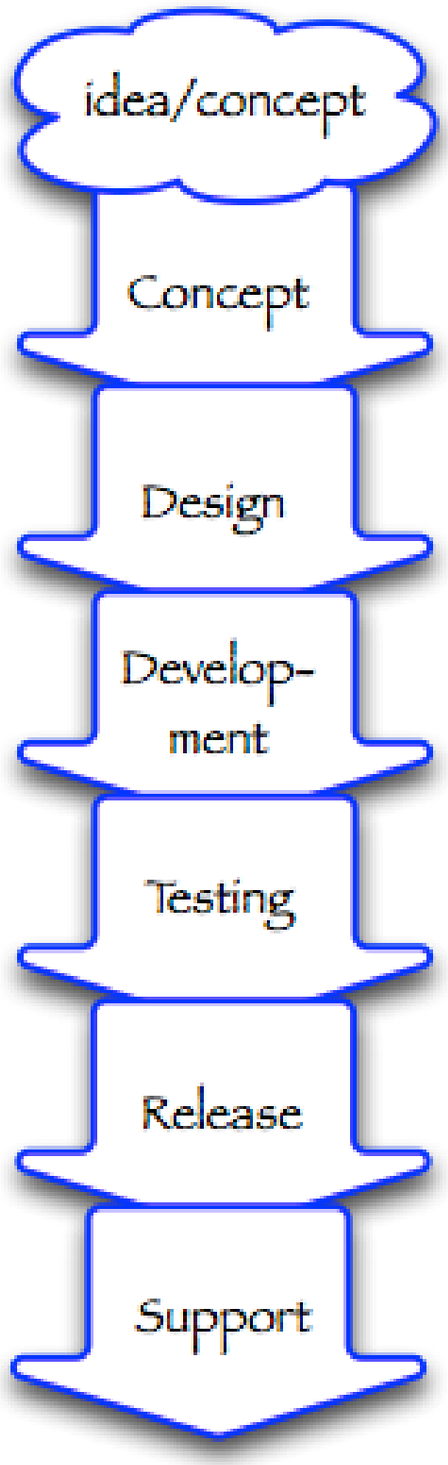
Supporting Mobile App Development

- Provide a roadmap for design, development and release of a mobile app
  - Design and idea brainstorming - what type of app should be developed?
  - Provide design consulting to build out the complete design.
  - Identify development resources for a project (internal and contract)
  - Help with packaging/marketing and deployment
- GitHub repository of shared code
- Dashboard of mobile app development
- Adhoc app deployment support for testing



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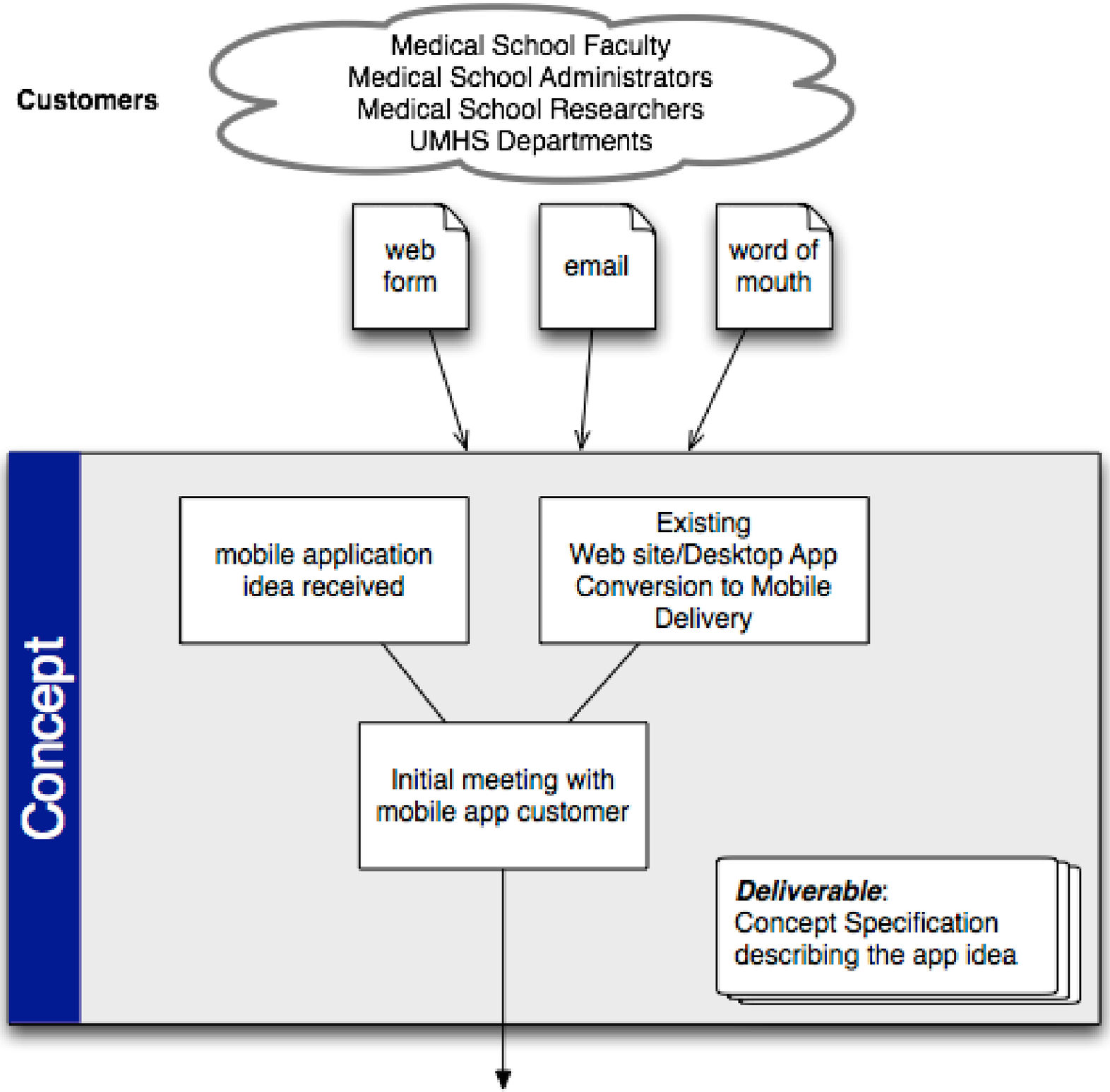
RoadMap - concept phase



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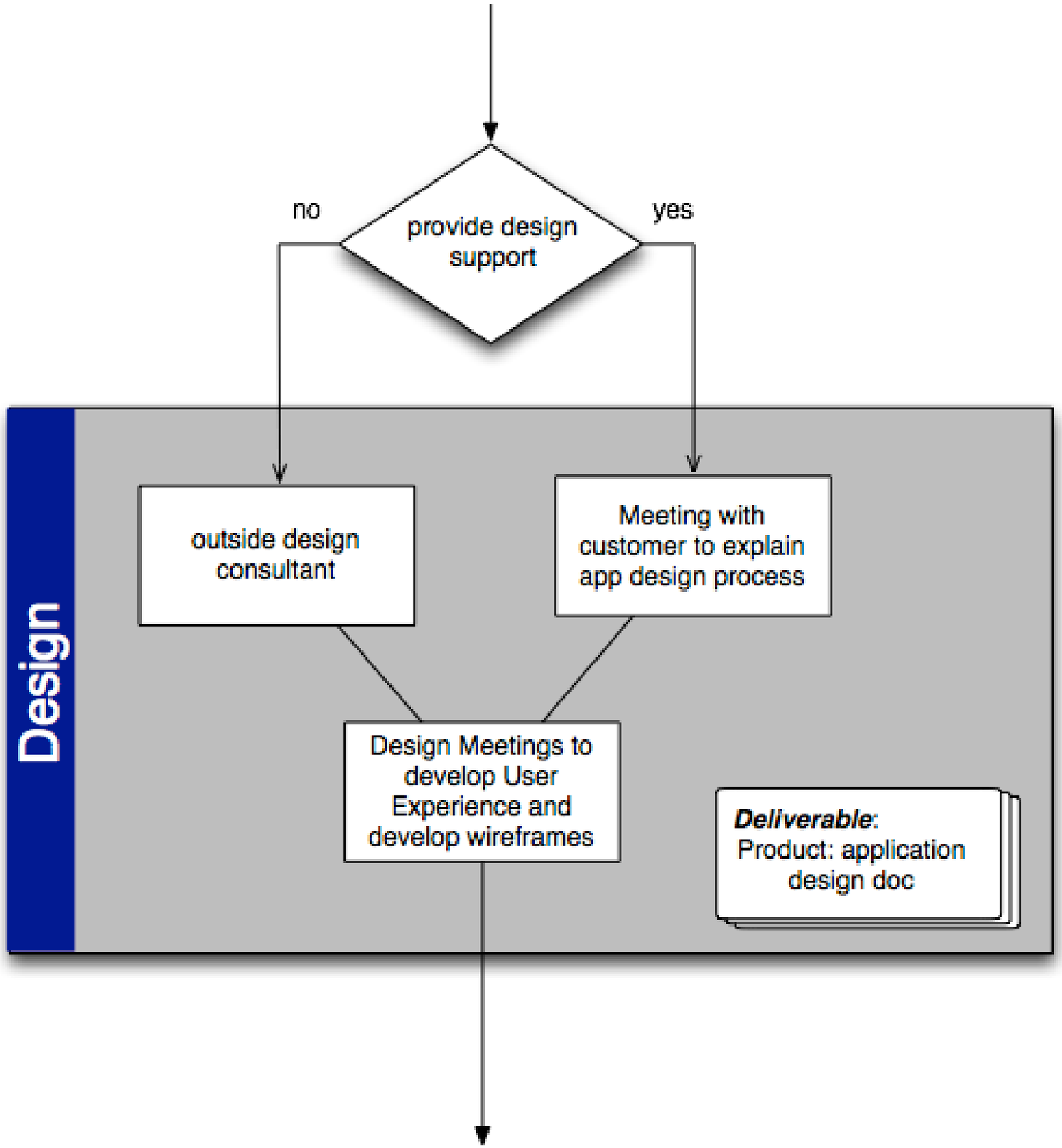
RoadMap - design phase



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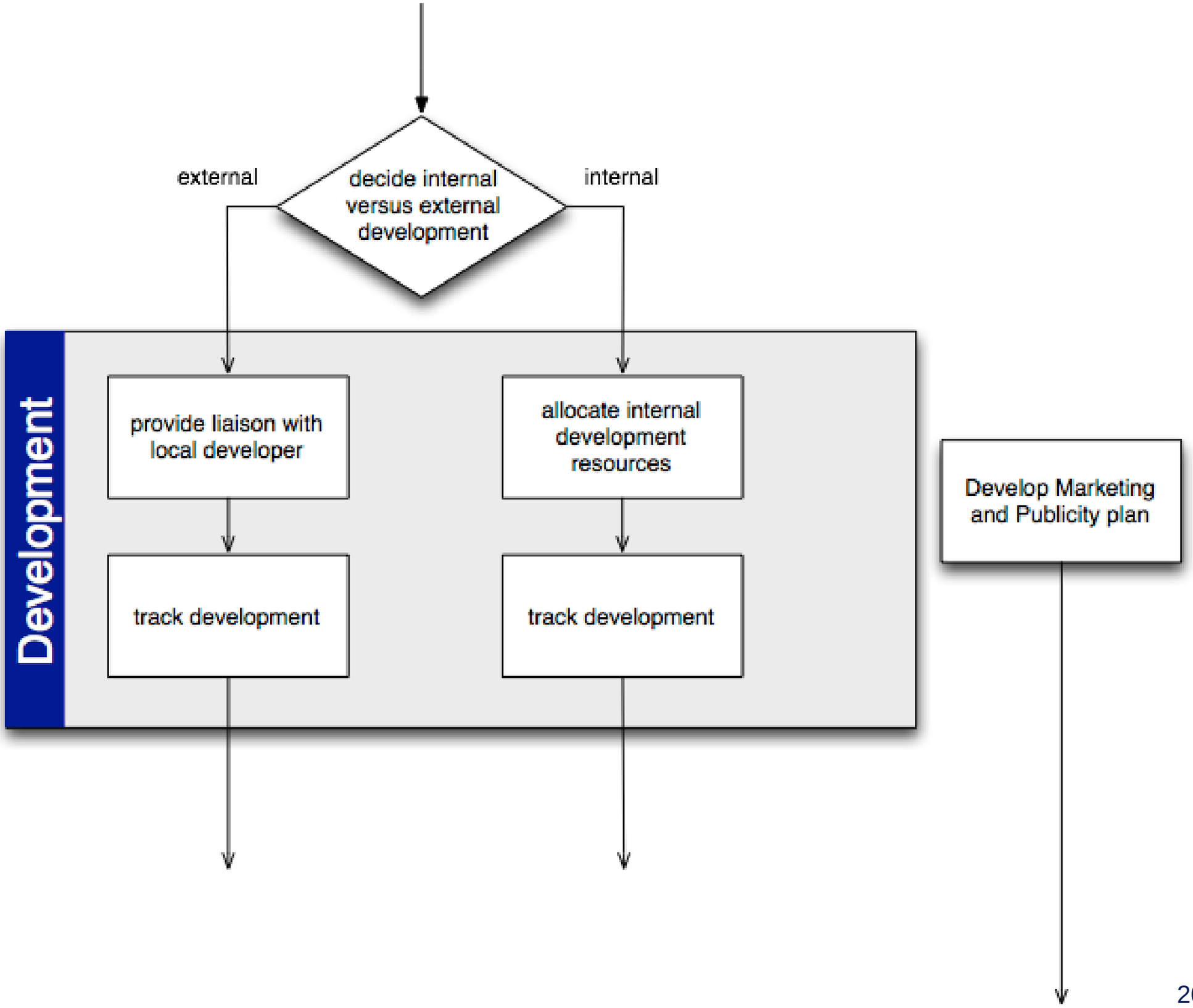
Roadmap - Development phase



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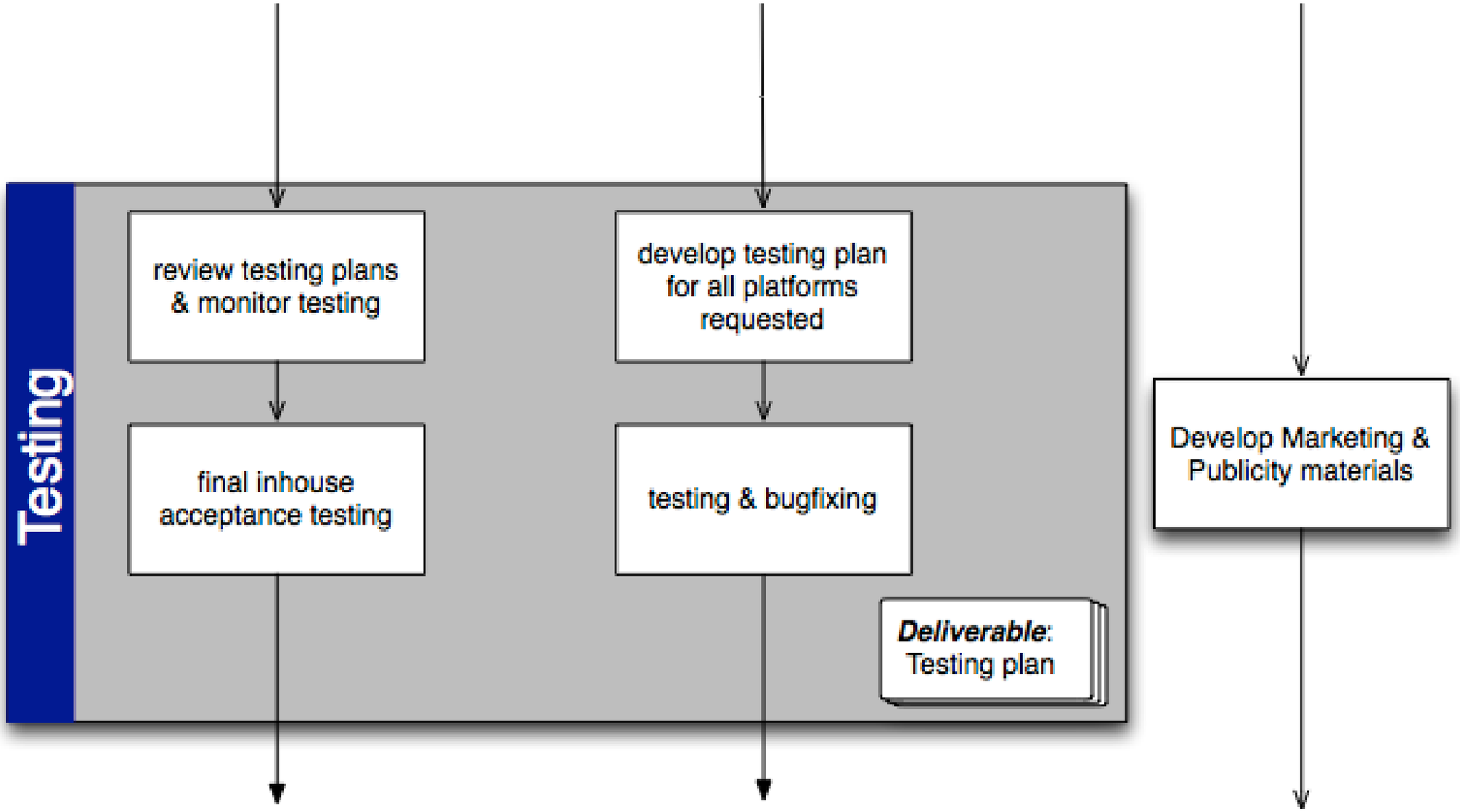
Roadmap - Testing phase



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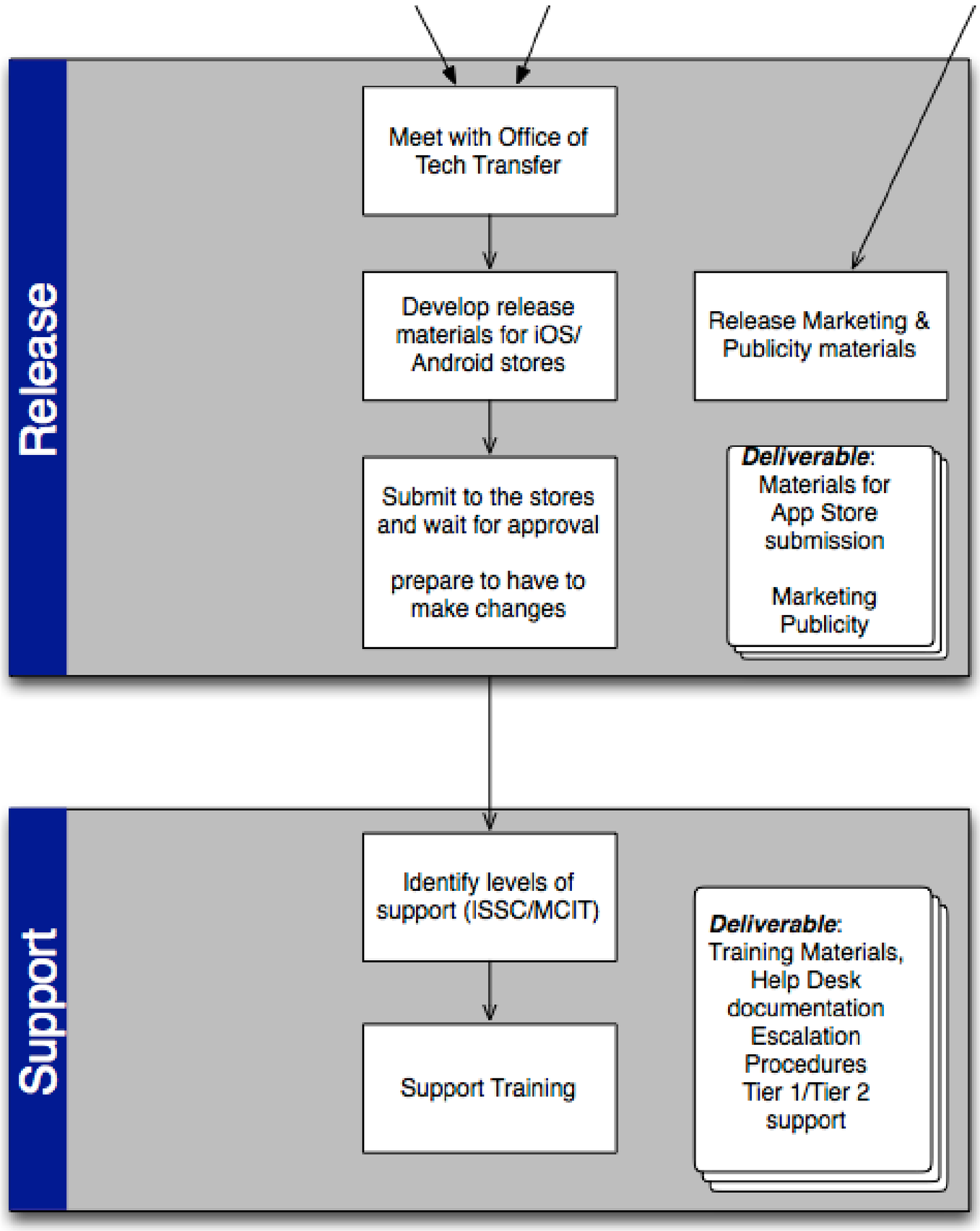
Roadmap - Release & Support



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Mobile Applications Characteristics

Native Applications	Web Applications
local applications	server-based applications
Objective C, JAVA, (JavaScript**)	HTML5, jQuery Mobile
can access all features of device. e.g. location services, notification services	limited access to device features (** this is changing)
app performance is critical - 3D Visualization, Gaming	for access to server-based data within an enterprise
Separate apps for each platform - iOS, Android, Blackberry, Windows, Nokia	iOS, Android, Blackberry, Windows, Nokia
Must deliver to separate Stores	Available to all platforms*
Updates required for all versions	Updates delivered from one location to all platforms*

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Development Environments

Native Apps Development

•iOS - Objective C/XCode http://developer.apple.com/devcenter/ios/

•Android - JAVA/Eclipse http://developer.android.com/sdk

•Windows/ Nokia
http://www.developer.nokia.com/Develop/Windows_Phone/

•Blackberry JAM - JAVA http://us.blackberry.com/developers/

•Cross-platform DevelopmentAppcelerator/Titanium
http://appcelerator.comPhoneGap
http://phonegap.comSencha Touch http://sencha.com

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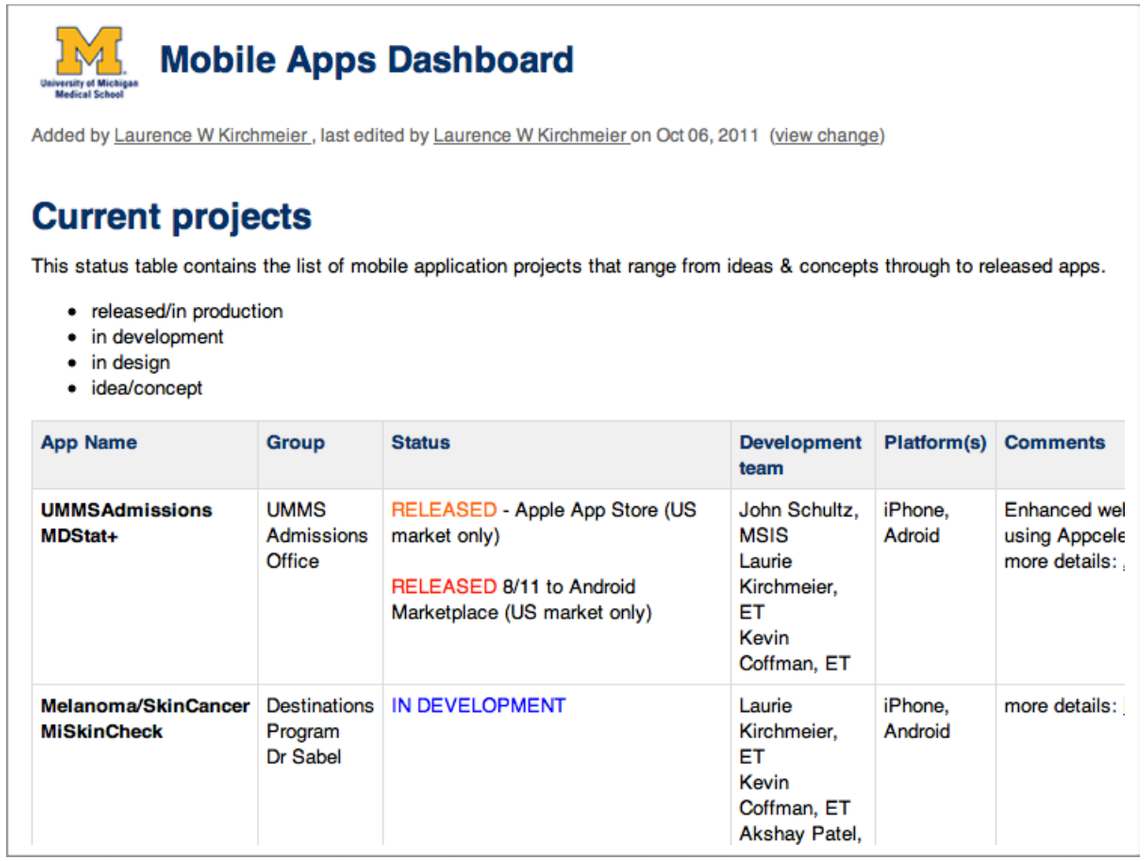
Fostering the Community



Mobile Apps Dashboard

Added by Laurence W Kirchmeier , last edited by Laurence W Kirchmeier on Oct 06, 2011 (view change)

Current projects

This status table contains the list of mobile application projects that range from ideas & concepts through to released apps.

- released/in production
- in development
- in design
- idea/concept

App Name	Group	Status	Development team	Platform(s)	Comments
UMMSAdmissions MDStat+	UMMS Admissions Office	RELEASED - Apple App Store (US market only) RELEASED 8/11 to Android Marketplace (US market only)	John Schultz, MSIS Laurie Kirchmeier, ET Kevin Coffman, ET	iPhone, Adroid	Enhanced wel using Appcele more details:
Melanoma/SkinCancer MiSkinCheck	Destinations Program Dr Sabel	IN DEVELOPMENT	Laurie Kirchmeier, ET Kevin Coffman, ET Akshay Patel,	iPhone, Android	more details:

- GitHub repository of shared code
- Dashboard of mobile app development
- Monthly Developer meetings
- Meeting with ITS Mobile team every month
- Participating in MCIT Mobile Device Support Working Group

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