

## UDOT RESEARCH PROJECT MANAGEMENT

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UDOT RESEARCH PROGRAM MANAGER



MICHIGAN DOT RESEARCH PEER EXCHANGE  
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## PROGRAM OVERVIEW

- MAJOR FUNCTIONS:
  - RESEARCH PROJECTS . . .
  - PRODUCT EVALUATION
    - NEW PRODUCTS
    - EXPERIMENTAL FEATURES
  - TECHNOLOGY TRANSFER
    - TRAINING
    - WHITE PAPERS / INQUIRIES
    - LIBRARY SERVICES

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## PROGRAM OVERVIEW

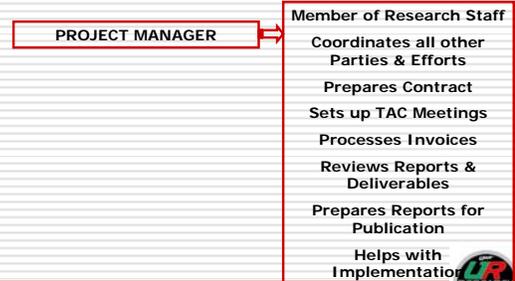
- RESEARCH PROJECT FUNCTIONS:
  - PROJECT IDENTIFICATION
    - SOLICITATION
    - PRIORITIZATION
    - SELECTION
  - PROJECT MANAGEMENT
  - PROJECT IMPLEMENTATION

UTRAC

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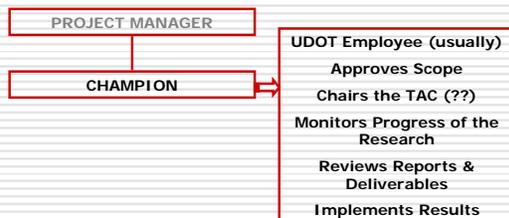
## PROJECT MANAGEMENT



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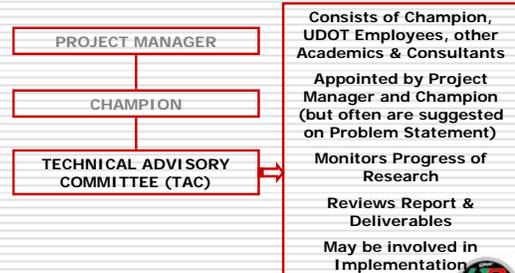
## PROJECT MANAGEMENT



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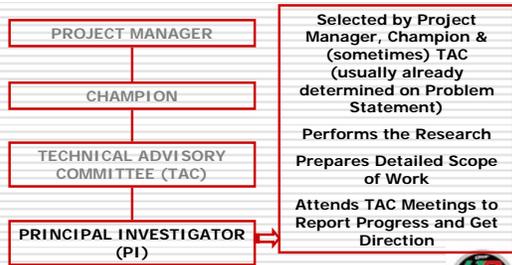
## PROJECT MANAGEMENT



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## PROJECT MANAGEMENT



Selected by Project Manager, Champion & (sometimes) TAC (usually already determined on Problem Statement)

Performs the Research  
Prepares Detailed Scope of Work

Attends TAC Meetings to Report Progress and Get Direction

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## SELECTION OF PI

- PROBLEM STATEMENT OFTEN DESIGNATES
  - STATEMENTS OFTEN INITIATED BY PI
  - CHAMPION SOMETIMES HAS A PARTICULAR PI IN MIND, OR HAS DISCUSSED PROBLEM WITH THEM
  - EXPERTS IN CERTAIN TOPICS ARE KNOWN

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## SELECTION OF PI

- MOST PIs ARE UNIVERSITY FACULTY
  - THREE CIVIL RESEARCH PROGRAMS:
    - UNIV OF UTAH (SALT LAKE)
    - UTAH STATE UNIV (LOGAN)
    - BRIGHAM YOUNG UNIV (PROVO)
  - HAVE MANY "REPEATING THEME" PROJECTS
  - HAVE CONSISTENT FACULTY PIs
  - SOMETIMES GO OUT OF STATE

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## SELECTION OF PI

- IF PI ISN'T PRE-DETERMINED:
  - PM, CHAMPION, TAC DISCUSS OPTIONS
  - SOLICITATION CAN BE DONE
- SOLE-SOURCE ISSUES:
  - CAN READILY SOLE-SOURCE TO TWO STATE UNIVERSITIES
  - CAN JUSTIFY SOLE-SOURCE TO OTHERS BECAUSE OF UNIQUE EXPERTISE

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## CONTRACT PROCESS

- PROCUREMENT PROCESS
  - MATERIALS, EQUIPMENT, SERVICES
- CONSULTANT SERVICES CONTRACT
  - DESIGN AND MANAGEMENT SERVICES
- RESEARCH CONTRACT PROCESS
  - RESEARCH-SPECIFIC CONTRACT DOCS
  - RESEARCH PREPARES DOCUMENTS
  - GENERALLY NON-COMPETITIVE

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## PROJECT MANAGEMENT

- RESEARCH STAFF OF 12
- BULK OF RESEARCH PROJECTS ARE MANAGED BY FOUR PEOPLE
  - 76 PROJECTS CURRENTLY UNDERWAY
  - 14 POOLED FUND PROJECTS (6 LEAD)
- INCONSISTENT APPROACHES
- INVOLVEMENT BY PM VARIES
  - PERSONAL STYLE
  - NEEDS OF PROJECT

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## PROJECT MANAGEMENT

- ❑ NO UNIFORM TRACKING TOOL
  - EXCEL SPREADSHEETS
    - ❑ CUMBERSOME FOR VAST & VARIED NATURE OF DATA WE NEED TO TRACK
    - ❑ END UP WITH VARIOUS VERSIONS AND INCONSISTENT DATA
    - ❑ NOT EVERYONE USES
  - FINANCIAL DATA (UDOT ACCOUNTING) NEITHER REGULAR NOR COMPLETE

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## PROJECT MANAGEMENT

- ❑ NO UNIFORM TRACKING TOOL
  - DEVELOPING ACCESS DATABASE
    - ❑ USING IN-HOUSE RESOURCES
    - ❑ BEEN A CHALLENGE TO PRODUCE ALL THE VARIED REPORTING NEEDS
    - ❑ END POINT SEEMS ELUSIVE
    - ❑ DOESN'T LINK TO ACCOUNTING SYSTEM, SO DOESN'T SOLVE THE NEED FOR FINANCIAL TRACKING

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## PROJECT MANAGEMENT

- ❑ TIMELY COMPLETION IS A CHALLENGE
  - ACADEMIC CALENDAR DRIVES SCHEDULE
  - ACADEMICS HAVE MANY DEMANDS REFEREED PUBLICATIONS HIGHER PRIORITY (TENURE ISSUE) THAN OURS
  - NO REAL LEVERAGE ON UNIVERSITIES
    - ❑ CONTRACT PAYMENTS NOT AN INCENTIVE
    - ❑ TRIED A "CAN'T PUBLISH IF YOU ARE BEHIND SCHEDULE" CLAUSE IN CONTRACT
    - ❑ GOT ENORMOUS PUSHBACK

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## PROJECT MANAGEMENT

- ❑ OTHER CHALLENGES:
  - HOW TO COMMIT CHAMPIONS?
  - IS THE PRIORITIZATION NOT WORKING?
  - ARE WE MISSING THE BIG PICTURE?
    - ❑ UDOT STRATEGIC PLAN
    - ❑ SPECIFIC INITIATIVES ("ABC")

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## FINAL REPORTS - FORMAT

- ❑ GENERAL FORMAT PRESCRIBED
  - STANDARD COVER
- UNIFORM NUMBERING SYSTEM
- FHWA ABSTRACT PAGE
- DISCLAIMER & ACKNOWLEDGEMENTS
- EXECUTIVE SUMMARY
- DOUBLE-SIDED IF >25 PAGES



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## FINAL REPORTS - FORMAT

- ❑ DEVELOPING MORE FORMAT REQMS
  - TYPE SIZE AND STYLE
  - NUMBERING / ORGANIZATIONAL SEQUENCE
  - STANDARD TABLE OF CONTENTS
- ❑ SOME PMs REVIEW AND EDIT
- ❑ HAVE CONSIDERED HIRING OUTSIDE EDITOR

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## REPORT FORMAT - CHALLENGES

- ❑ INTERNAL DISAGREEMENT ON FORMAT
- ❑ ENFORCEMENT ISSUES
  - HARD TO GET AUTHORS TO ADHERE
    - ❑ NOT WORTH THE TROUBLE
    - ❑ TIME CONSUMING
  - NOT IMPORTANT TO SOME PMs
- ❑ REPORTS GET SUBMITTED BUT NOT PUBLISHED (TIME ISSUE)

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## FINAL REPORTS - OWNERSHIP

- ❑ UDOT OWNS ALL DELIVERABLES
- ❑ PI HAS NON-EXCLUSIVE RIGHT TO USE DELIVERABLE
- ❑ PI MAY SEEK PATENT / COPYRIGHT
  - UDOT / FHWA GET NON-EXCLUSIVE, ROYALTY-FREE LICENSE
- ❑ REPORT CONTAINS DISCLAIMER AND OWNERSHIP STATEMENT

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QUESTIONS???



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