For a more comprehensive understanding of the proposed approach, please see the attendant document “Report, Team #3, IT Staff Training and Education – rev h”.

**Project Title** –

Standard and Coordinated Training Opportunities for IT Staff for Professional and Career Development

**Project Team** –

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<tr>
<th>Name</th>
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<td>Foster, Douglas R.</td>
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<td>Lill, Markus A.</td>
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<td>McKinnis, David R.</td>
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<td>Mullins, James L.</td>
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<td>Schroeder, Terry W.</td>
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<td>Springer, Mitchell L.</td>
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<td>Vedder, Kevin A.</td>
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**Executive Summary** –

The Operational Oversight Committee (OOC) Team #3 sub-committee will address IT staff on the Purdue University campus in West Lafayette. The sub-committee will focus on defining IT staff career paths, development towards career progression, competency variances from those competencies required for satisfactory performance within a given labor/salary grade, and, subsequent training aligned to Purdue IT organizational strategic objectives.

To successfully achieve the statement of work defined requirements, the OOC Team #3 sub-committee will focus attention on three strategically aligned and highly integrated initiatives:

1. Definition and development of an IT functional discipline career plan – this in an effort to define and differentiate the IT roles within the discipline - this in response to the question “what is required to move into increasingly hierarchical, or peer-level, roles with attendant responsibilities”.

2. Definition and development of an IT staff competency model spanning all IT role categories - this in response to the question “what is the right level of knowledge and skills to perform in a given role”.
3. Organizational strategic and tactical training plans aligned to Purdue University IT organizational strategic business objectives - this in response to focused strategic alignment of training and education with organizational objectives/pursuits.

The underlying common denominator of the above three initiatives is an Individual Development Plan (IDP) for each individual within the IT functional discipline. It is anticipated the IDP will be part of the Purdue University new performance and development initiative. In the unlikely event a Purdue University performance and development plan is not implemented, it is the recommendation of this committee that one of similar nature be implemented, and, the IDP be an element of it.

The integration of the above three initiatives will provide personal and professional development and career opportunities, focused strategically and tactically on short- and long-term IT organizational objectives.

It is recognized the scope and subsequent applicability of this proposed initiative will be to solid-line relationships and hierarchies within the reporting hierarchy of G. McCartney. This understanding does not preclude other dashed-line organizations or academic specific IT personnel from participating should they choose to do so.

**Alternatives Considered –**

The skill set required to perform efficiently and effectively have changed as technology alone has changed. Coupling the many changes in technology, with the more recent focus of Purdue University continuing to evolve colleges from a traditional learning-based environment to one of learning, discovery and engagement and the scholarship thereof, demands updated and different skills to perform in this new paradigm.

Effective career planning provides for individual personal and professional growth and career opportunities. Career planning creates a highly integrated and synchronized effort to recruit, develop, and retain an organization’s personnel.

Simply stated, *career planning* is a process of developing talent to meet the needs of the organization now and in the future. Every time a manager makes a work assignment, he or she is preparing someone
Recommendation(s) –

The overarching purpose of this report is to solidify an underlying strategic foundation with tactical implications for future action. The subsequent natural evolutions of the recommendations set forth in this report are detailed below.

- An Implementation team should be formed to orchestrate successful implementation of recommendations of this report
- It is likely three subcommittees, all acting under the leadership of the above referenced Implementation Team, will be formed to address:
  - Career planning
  - IT competency modeling
  - Training and development planning aligned to organizational strategic thrusts

While it is difficult to estimate a timeframe for completion of the above efforts, this committee suggests one year from initial Implementation Team kick-off as the target end date for full implementation.

Impact Assessment (if known)

Key stakeholders –

Purdue University administration, Purdue University Information Technology, academic colleges

Impact on stakeholders –

Purdue University Information Technology – provides personal and professional growth and career opportunities in a fair and methodical process-oriented approach.

Academic colleges – provides required knowledge, skills and abilities through functional responsibility for professional training and development.

Purdue University administration – provides IT strategic and tactical training and development opportunities aligned to the short- and long-term objectives and technology projections of Purdue, IT and the academic colleges.

Identify assumptions –

Full time-phased implementation

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1 Rothwell, W. (2010). Effective Succession Planning. AMACOM.
Risks associated with the recommendation –
Insufficient or inadequate implementation

Identify organizational units responsible for implementation –
Purdue University Information Technology, Human Resources

Timeline –
While it is difficult to estimate a timeframe for completion of the above efforts, this committee suggests one year from initial Implementation Team kick-off as the target end date for full implementation

Cost Savings –
Not calculable at this time. It is expected however, to be significant.

Resource Requirements –
Not calculable at this time. It is anticipated the implementation team will be a cross-functional body with this effort as part of their in-scope responsibilities.
Team #3 - Standard and Coordinated Training Opportunities for IT Staff for Professional and Career Development

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Original Statement of Work:
“…There are almost 850-900 professional IT staff on campus, but there is no standardized training or competency certifications for this group. There is also not a standardized career path for IT professionals across campus. This leads to inconsistencies among IT units in terms of training, certification competency, and career path development. This team will review whether other institutions have systematic training and career path development for IT staff and propose a system of IT training and career development opportunities for campus IT staff.”

Statement of Work (w/ Proposed Changes):¹
“…There are almost 850-900 professional IT staff on campus, but there is very little standardized training or competency certifications for this group. There is also not a standardized career path for IT professionals across campus. This leads to inconsistencies among IT units in terms of training, certification competency, career path development, compensation, promotional opportunities, and in some cases morale and productivity. This team will review whether other institutions have effective systematic training and career path development for IT staff and propose a system of IT training and career development opportunities for campus IT staff.”

Project Scope Statement:
The Operational Oversight Committee (OOC) Team #3 sub-committee will address IT staff on the Purdue University campus in West Lafayette. The sub-committee will focus on defining IT staff career paths, development towards career progression, competency variances from those competencies required for satisfactory performance within a given labor/salary grade, and, subsequent training aligned to Purdue IT organizational strategic objectives.

To successfully achieve the statement of work defined requirements, the OOC Team #3 sub-committee will focus attention on three strategically aligned and highly integrated initiatives:

1. Definition and development of an IT functional discipline career plan – this in an effort to define and differentiate the IT roles within the discipline - this in response to the question “what is required to move into increasingly hierarchical, or peer-level, roles with attendant responsibilities”.
2. Definition and development of an IT staff competency model spanning all IT role categories - this in response to the question “what is the right level of knowledge and skills to perform in a given role”.

¹ It is the recommendation of this committee that the original Statement of Work be changed to reflect the wording in this section.
3. Organizational strategic and tactical training plans aligned to Purdue University IT organizational strategic business objectives - this in response to focused strategic alignment of training and education with organizational objectives/pursuits.

The underlying common denominator of the above three initiatives is an Individual Development Plan (IDP) for each individual within the IT functional discipline. It is anticipated the IDP will be part of the Purdue University new performance and development initiative. In the unlikely event a Purdue University performance and development plan is not implemented, it is the recommendation of this committee that one of similar nature be implemented, and, the IDP be an element of it.

The integration of the above three initiatives will provide personal and professional development and career opportunities, focused strategically and tactically on short- and long-term IT organizational objectives.

It is recognized the scope and subsequent applicability of this proposed initiative will be to solid-line relationships and hierarchies within the reporting hierarchy of G. McCartney. This understanding does not preclude other dashed-line organizations or academic specific IT personnel from participating should they choose to do so.

**Overview of Career Planning**

This guide to IT staff career planning for Purdue University exists in part in response to previous efforts of the Purdue University Operational Oversight Committee under Gerry McCartney, V.P. Purdue University Information Technology and Chief Information Officer.

In the winter of 2010, the Operational Oversight Committee met to discuss, among other things, training opportunities for IT staff and development. At that meeting it was stated:

“There are almost 850-900 professional IT staff on campus, but there is no standardized training or competency certifications for this group. There is also not a standardized career path for IT professionals across campus. This leads to inconsistencies among IT units in terms of training, certification competency, and career path development. This team will review whether other institutions have systematic training and career path development for IT staff and propose a system of IT training and career development opportunities for campus IT staff.”

The skill set required to perform efficiently and effectively have changed as technology alone has changed. Coupling the many changes in technology, with the more recent focus of Purdue University continuing to evolve colleges from a traditional learning-based environment to one of learning, discovery and engagement and the scholarship thereof, demands updated and different skills to perform in this new paradigm.
Effective career planning provides for individual personal and professional growth and career opportunities. Career planning creates a highly integrated and synchronized effort to recruit, develop, and retain an organization’s personnel.

Simply stated, career planning is a process of developing talent to meet the needs of the organization now and in the future. Every time a manager makes a work assignment, he or she is preparing someone for the future by building that worker’s ability. Work experience builds competence, and different kinds of work experience build different kinds of competence.2

**Why is Career Planning Important?**
Career planning is a tool to protect against any number of anticipated or unanticipated events within an organizational setting. There is no shortfall of literature discussing the world-wide aging of the world’s population. This aging, coupled with a perceived shortfall of skilled labor, directly necessitates an organization’s ability to develop and promote talent from within. The added benefit of developing and promoting from within is an organizational benefit through the retention of company knowledge. New hires involve relocation, training, and indoctrination which have been documented to carry costs averaging $10,000 to $50,000 per hire. These costs do not include the time required to understand an organization’s policies, practices, procedures, and culture. If a new hire does not feel a sense of belonging to the new organization, then the cost has little to no return on new hire investment.

Effective career planning provides for a ready-made workforce. Literature reveals a happy workforce is a more productive workforce. Career planning also provides an organization’s workforce with a purpose aligned to career advancement. This concept of personalizing the greater vision converts external energy into internal energy; which creates the required thrust for sustaining organizational goals and vision.

**Who is Career Planning For?**
Career planning can be used at any level in the organization. Positions more commonly discussed in the literature are executive, senior managers, and leadership teams. Career planning, however, can be used at any level or for any position in an organization. Career planning can be especially useful in sustaining hard to fill positions.

**Definition and Differentiation of IT Roles within the Discipline**
To effectively perform a position analysis, each role within the IT discipline must first be defined and sufficiently differentiated. This process allows for, and supports the delineation of positions such as customer service representative, application developer, software support systems, network administrator and other related congregates of skills.

Activities of Effective Career Planning

The first step in implementing a career plan is to perform a job analysis on each position within the discipline position tree. This provides an understanding of the required knowledge, skills, and abilities to perform in the target position(s). With this knowledge, each individual in the career planning hierarchy can be analyzed relative to the below:

- What are their knowledge, skills, and abilities
- What training would they need to move up
- What education would they need to move up
- What assignments would be most beneficial to prepare for next move
- How long in current position and how long before ready for next position

Below is a depiction of a format used for the planning of a career plan³.

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Each individual, then, must have an Individual Development Plan (IDP). The IDP is the mapping medium between where an employee is at the current time and what is required to progress to the next level. The IDP takes into account the following:

- Identify next position in succession tree
- Determine time required for preparation
- What training or education is required in preparation for next move
- What resources will they require to gain the necessary training and/or education
- What interim assignments, tasks, or responsibilities should the employee assume or be part of
What Do We Do When A Position Vacates?
When someone vacates a position there is a series of steps that are immediately enacted based on the above planning effort.

- Present the list of available candidates to the hiring manager
- Select the best fit for the vacant position
- Backfill the selected candidates newly emptied position through the iteratively defined process
- Backfill the lowest position vacated, if necessary, with others internally or an outside fresh hire

Things to Remember
It is important to heighten awareness that there can only be one person in each named position. Even though an individual may have sufficient knowledge, skills, and abilities, there may not be an opening for that individual to promote into; i.e., there must be an available opportunity for promotion. It is equally important that others who may be qualified are considered even if they are from another “outside” function. In other words, someone from the business office may be qualified to fill a position in the administrative professional discipline, and vice versa. Generally, then:

- There can only be 1 president, provost, dean, etc.
- Even though an employee is ready for the next position, there must be an opportunity (see above)
- Look at everyone for peer/parallel level rotations and fills, versus vertical moves; across disciplines, e.g, program management to marketing …
- Assess each individual still in the pipeline to determine their potential/applicability for advancing

Final thoughts on effective career planning:

- Creates a process that is fair
- Provides equitable opportunity
- Promotes personal and professional growth
- Creates a career progression
- Reduces turnover – we know we have opportunities we can be prepared for
Maintains and retains institutional knowledge

Common business sense - $$

Who Is Responsible?
While successful implementation of this proposal is a shared responsibility, career planning as a process within IT at Purdue University should be assigned to a single individual. This approach creates accountability for on-going focused effort and helps to ensure effective implementation. To help guide and provide insight into shareholder interests, there is an advisory board composed of representatives from the university. Membership in the advisory board is for one year.

Creation of a Competency Model
Every discipline, to be a discipline, must have competencies. Competencies define the behaviors indicative of what is required to be successful in the respective discipline. Competencies, then, allow us to judge ourselves in terms of how much we know about a given competency, which, in turn, allows us to pursue a better understanding of a given competency through training and education. In other words, since competencies are nothing more than manifested behaviors, which we can form through training, competencies are things we can develop in ourselves and others. The question to be asked, however, is what are the agreed-to competencies of a given discipline?

Competency models define behaviors and imbedded skills which an employee and their supervisor can discuss to an agreed to understanding. Each skill provides for a Likert scale rating. The difference between the employee’s perspective and the supervisor’s of the employee’s rating by skill is an opportunity for training and development. This directly implies, then, each skill should have a ready list of training and educational suggestions for the employee to pursue should the employee be defined as having weakness in that particular skill.

Competency models for IT professionals are readily available. A recent internet search revealed approximately 2000 books and referenced articles.

The IT competency model will function as a tool to help define the IT discipline role-specific competencies as they relate to role-specific knowledge, skills and abilities.

Organizational Strategic and Tactical Training Plans
What does it mean to suggest alignment of strategic and tactical training and development plans to strategic pursuits? In brief:

- Determine your organization’s key business pursuits and/or marketing niches
- Identify existing and required technologies and knowledge
Build your employee development opportunities around the gaps to build the organization.

What do leadership, management, successor and cultural training all have in common? They are all subject to elimination based on budget constraints and/or cash conservation. Why? Because they are not perceived as essential to winning new business, and, subsequently growing the organization. When profits are flowing and we feel cash rich, we tend to offer those employee development opportunities we feel satisfy the developmental needs of our first line, middle managers and succession pipelines. When, on the other hand, budgets tighten, the perceived touchy feely, nice to have but not essential, non-value added employee training and development is budget line item reduced or worse, deleted.

If on the other hand, we want to add real value with our employee development opportunities, then we need to tie them directly to our key business pursuits or desired market niches. In this way, to eliminate a training or educational opportunity is to say we’re willing to weaken our opportunity for success in that targeted business or niche. In other words, we do not have the knowledge to pursue this business or market niche if we do not stay the course with this developmental opportunity. Our IT professionals simply do not know what they need to know.

Underlying this argument is the explicit implication that we are not willing to spend resources, knowing we have increased the risk of satisfying the strategic need. That, in fact, we knowingly, willingly and intentionally are poised for failure, or in the least a lesser opportunity for success. With this rational argument, then, we have tied the developmental opportunity to the inevitable success of our IT organization.

The following provides a model that defines a process with multiple activities and attendant products. The overall purpose of which, will be to reconcile key organization pursuits and technologies with employee developmental opportunities for increased probability of future growth.

Strategic alignment to organizational pursuits is an outside in perspective. Meaning, we first look at what products or services we need to provide or support to help grow our organization. In this sense, we are visualizing future organizational interests. Given these interests, we will subsequently align short (tactical) and long-term (strategic) training and development opportunities to existing or new personnel.

The below figure depicts this understanding.
In the above, key organizational interests are forecasted over a 5-year horizon. These, coupled with current technology and knowledge the organization currently possesses are inputs to the process. At the strategic level, identify, from the inputs, what has to be done and what the organization is currently capable of doing. The organization then documents this in a strategic training and development plan.

Subsequent to the development of the strategic plan, is the development of the organization’s tactical training and development plan. There may be many tactical training and development plans, each specific to an organizational entity within IT.

Below depicts the transition from the strategic to tactical training and development plans as viewed from a business organization’s perspective.
As can be viewed from the above, each organizational pursuit is subjected to a series of increasingly aligned questions, yielding a hierarchically aligned tactical line item to a competency gap. In this example, the strategic pursuit is to enter the sonobuoy market. Using HR as an organization’s function, it can be determined what training is required (strategic) and specifically who is required to participate and when (tactical).

**Tying it all Together**

This report defines three primary concepts: (1) career planning, (2) competency models, and (3) alignment of training and education to strategic pursuits. Competency models are tools to help define what gaps exist in current roles within the IT discipline. Understanding our PU IT strategic thrusts helps us to provide just-in-time training and educational opportunities. Career planning provides an overarching framework for individual personal and professional growth and career opportunities.

The combination of the three concepts proposed in this report provides focused resources and energies on doing only what is required now and in the future as defined by strategy. The culmination of these three efforts is to provide a highly synchronized, fully strategically aligned and justifiably funded strategic and tactical training and development plan for Purdue University Information Technology professionals. A plan for now, and in the future.
Next Steps

The overarching purpose of this report is to solidify an underlying strategic foundation with tactical implications for future action. The next natural evolutions of the recommendations set forth in this report are detailed below.

- An Implementation team should be formed to orchestrate successful implementation of recommendations of this report
- It is likely three subcommittees, all acting under the leadership of the above referenced Implementation Team, will be formed to address:
  a. Career planning
  b. IT competency modeling
  c. Training and development planning aligned to organizational strategic thrusts

While it is difficult to estimate a timeframe for completion of the above efforts, this committee suggests one year from initial Implementation Team kick-off as the target end date for full implementation.