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APPLICANT ASSESSMENT: DEVELOPING TOOLS TO GET THE RIGHT EMPLOYEES

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Our Goal



Go from this:



To this:



And avoid this:



Through Thoughtful Assessment, Selection, Design
and Implementation

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Our Environment

Increased Competition

- Internal Government



- Private Sector



Increased Constraints

- Many agencies and departments downsized recruitment/staffing functions
- Hiring Reform eliminated written KSAs
- Federal hiring authorities/processes assume a paper-based application process

Increased Use of Online Applications

- Numerous tools allow for online application
- Most use resume builder
- Some allow for uploading of resume and necessary supporting materials
- Applying is as easy as
- Significant increase in # of applications
 - # of applicants
 - # of positions to which they apply

Increased Assessment Capabilities

- Significant strides made in assessment capabilities
- Multiple administration modes available
- Technological advances allow for more sophisticated assessment approaches



Our Strategy

Identified Where We Could Gather Data

- Job Application
- Internet-based assessments
- Proctored assessments

- Evaluate the capabilities of the underlying technology

Developed an Initial Test Plan

- Conducted literature review
- Created competency x assessment x administration mode matrix
- Selected combination of assessments that
 - Maximize validity
 - Minimize subgroup differences
 - Maximize efficiency of process
 - Minimize possibility of cheating
 - Minimize long-term cost

Identified Competencies of Interest

- Reviewed results of three agency-wide job analyses
- Reviewed normal entry path
- Verified recommendations with subject matter experts
- Identified criteria of interest
 - Training Performance
 - Job Performance

Development, Validation & Maintenance Plan

- Each assessment developed using current best-practices (e.g., SME involvement whenever possible)
- Maintenance plan may impact feasibility of some choices



Is the resume sufficient?

Resume

- Applicants summarize their background and experience in a “standardized” format
- Positives
 - Streamlines the application process
 - Likely to increase the number of applications
- Potential Pitfalls
 - Applications may not provide all of the job-relevant information
 - Applicants may not write clearly
 - Labor intensive review required

Traditional KSA Essays

- Applicants provide written responses to items that summarize their KSA related background and experience
- Positives
 - All applicants given equal opportunity to respond
 - Responses provide job-relevant information
- Potential Pitfalls
 - Good applicants may not apply
 - Applicants may not provide all of the job-relevant information
 - Applicants may not write clearly
 - Labor intensive review required

Given significant increase in the number of applications, standardized assessments should be considered

How should we assess?

Unproctored Assessments

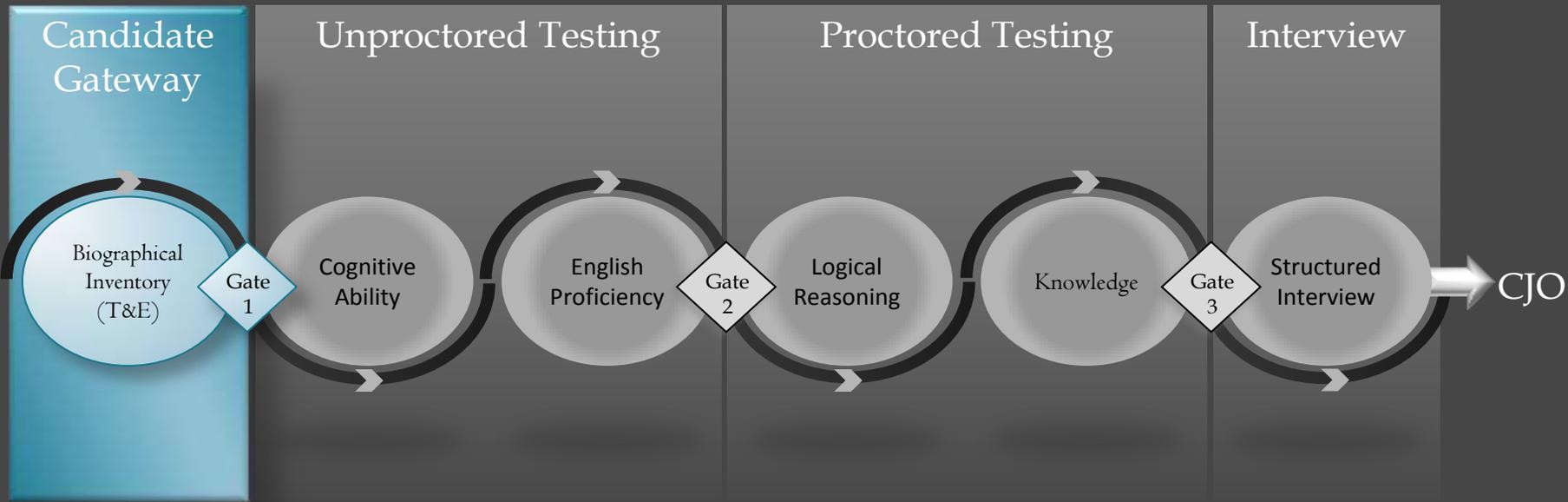
- Standardized assessments of competencies administered via the internet
- Positives
 - Efficient, reliable and valid
 - Minimize costs of administration
- Potential Pitfalls
 - Susceptible to error
 - Potential for cheating
 - Potentially cumbersome data management issues
- Assessments chosen for this mode
 - Cognitive Aptitude Test Battery
 - Test of English proficiency
 - Motivation & Personality Survey

Proctored Assessments

- Standardized assessments of knowledge, skills, abilities or other characteristics administered with supervision
- Positives
 - Efficient, reliable and valid
 - Minimizes sources of error (e.g., cheating, environmental factors)
- Potential Pitfalls
 - Potentially expensive delivery
 - Potentially cumbersome data management issues
 - Potential time drag on process
- Assessments chosen for this mode
 - Special knowledge or proficiency tests



Biographical Inventory (T&E)



Biographical Inventory

- Administered within application
- Applicants complete questions related to interest, education, work experience, and technical accomplishments
- Expedites resume sourcing and review process
- Identifies candidates that are of particular interest to a skill area

Candidate ID	Category	Score 1	Score 2	Score 3	Score 4	Score 5	Score 6	Score 7
C-0001	Gate 1	85.00%	78.00%	92.00%	88.00%	75.00%	80.00%	85.00%
C-0002	Gate 1	78.00%	82.00%	88.00%	80.00%	72.00%	78.00%	82.00%
C-0003	Gate 1	92.00%	88.00%	85.00%	80.00%	75.00%	70.00%	65.00%
C-0004	Gate 1	88.00%	82.00%	78.00%	72.00%	68.00%	62.00%	58.00%
C-0005	Gate 1	80.00%	75.00%	70.00%	65.00%	60.00%	55.00%	50.00%
C-0006	Gate 1	75.00%	70.00%	65.00%	60.00%	55.00%	50.00%	45.00%
C-0007	Gate 1	70.00%	65.00%	60.00%	55.00%	50.00%	45.00%	40.00%
C-0008	Gate 1	65.00%	60.00%	55.00%	50.00%	45.00%	40.00%	35.00%
C-0009	Gate 1	60.00%	55.00%	50.00%	45.00%	40.00%	35.00%	30.00%
C-0010	Gate 1	55.00%	50.00%	45.00%	40.00%	35.00%	30.00%	25.00%
C-0011	Gate 1	50.00%	45.00%	40.00%	35.00%	30.00%	25.00%	20.00%
C-0012	Gate 1	45.00%	40.00%	35.00%	30.00%	25.00%	20.00%	15.00%
C-0013	Gate 1	40.00%	35.00%	30.00%	25.00%	20.00%	15.00%	10.00%
C-0014	Gate 1	35.00%	30.00%	25.00%	20.00%	15.00%	10.00%	5.00%
C-0015	Gate 1	30.00%	25.00%	20.00%	15.00%	10.00%	5.00%	0.00%



Biographical Inventory Examples

Work Preferences

- Focused on skill area
- Questions related to experience and interest

In which skill area(s) are you interested in working?

- Business/Finance
- Computer Networking Operations
- Computer Programming
- Computer Science
- Computer/Electrical Engineering
- Cryptanalysis/Signals Analysis
- Cyber Security
- Engineering
- Foreign Languages
- Information Assurance/Security
- Installation and Logistics
- Intelligence
- Mathematics
- Networking and Telecommunications
- Project/Program Management
- Security
- Technical Writing
- I would like to work in a skill area that is not listed

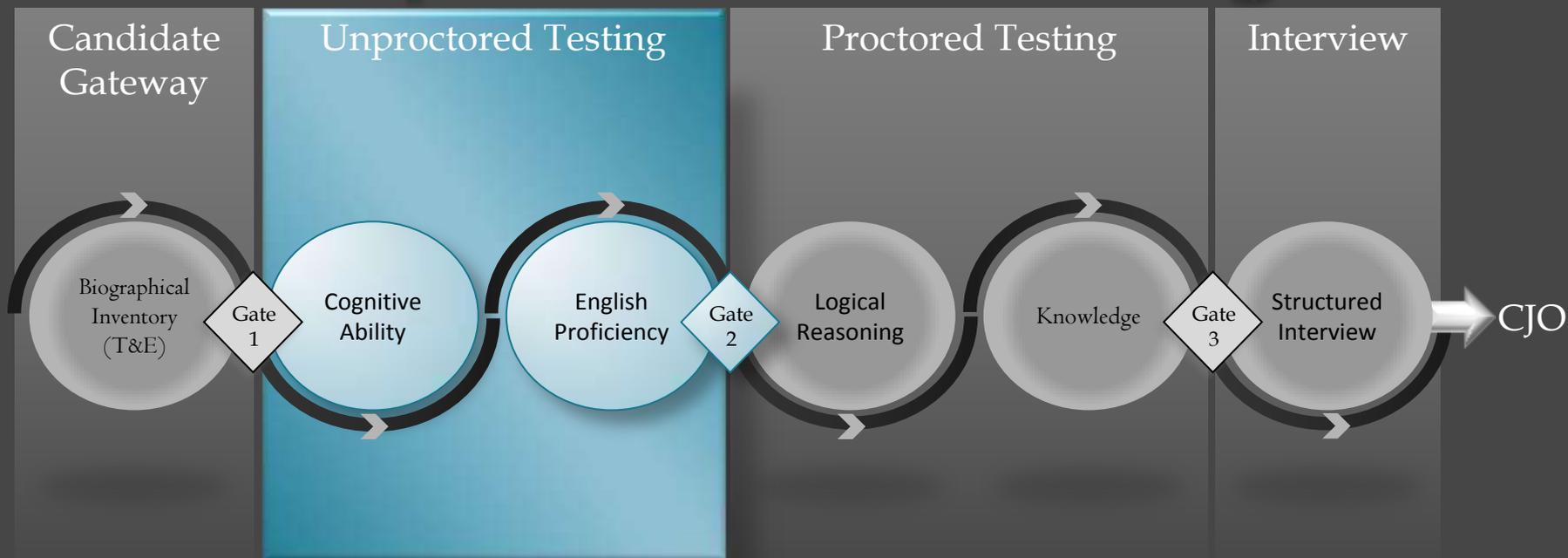
Technical Experiences

- Focused on professional work experience
- Specific

Which of the following technical experiences have you completed? (Choose all that apply)

- I do not have prior work experience
- Analyzed or manipulated large quantities of data
- Collected or created sample data for use in prototype design and development
- Conducted research resulting in the creation of novel algorithms or techniques
- Contributed to an open source software project or system
- Designed or developed a large application, database or system
- Served as an administrator for a website or blog
- Used Hadoop for analyzing large datasets
- Utilized software testing techniques
- Participated on a computer network "Capture the Flag" team

Unproctored Testing



Unproctored Testing

- Online administration
- Measures
 - Cognitive Aptitude Test Battery
 - Test of English Proficiency
 - Motivation And Personality Survey
- Effective predictors of training and job performance
- Efficient way to assess large numbers of candidates quickly



Unproctored Tests

Matrix Items

● ●	■ ■	▲ ▲	▲	△ △ △ △	● ● ● ●
▲ ▲ ▲	● ● ●	■ ■ ■	○ ○ ○ ○	▲ ▲	□ □ □ □
■ ■ ■ ■	▲ ▲ ▲ ▲	?			

Number Series

1, 1, 2, 3, 5, ?

Motivation and Personality (MAPS)

People who know me well would say that I focus on my mistakes when things don't go as planned.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

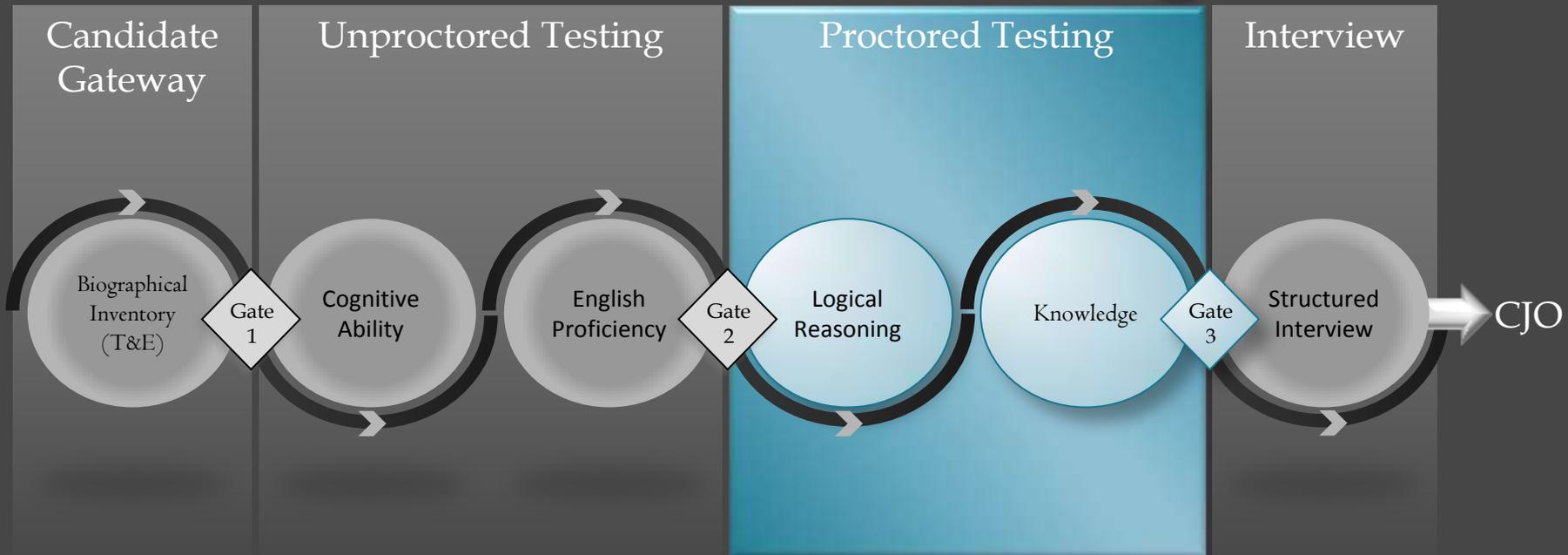
Test of English Proficiency

Instructions: Choose the item that is not correct. If items A, B, and C are correct, choose D.

- A. Four documents comprise the report series.
- B. The report series is composed of four documents.
- C. The report series are comprised of four documents.
- D. All items are correct.



Proctored Testing



Proctored Testing

- Proctored administration
- Examinees to use deductive reasoning to evaluate statements as true, false or lacking sufficient information to judge
- Effective predictor of training and job performance
- Can be used as a verification marker after the unproctored tests



Proctored Tests

Logical Reasoning Test

The MegaByte organization produces computers at two facilities. All computers made in the Smithville production facility are laptops.

The Johnstown production facility makes laptop and desktop computers.

	True	False	Insufficient Information to Decide
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Any desktop computer created by MegaByte organization was not made at the Smithville facility.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Most laptop computers created by MegaByte organization were not made at the Smithville facility.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
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Proctored Assessments

- Defense Language Proficiency Test
- Math Proficiency Test
- Cognitive Ability Verification Test (temporary)
- Special job knowledge tests

Computer Networking Test

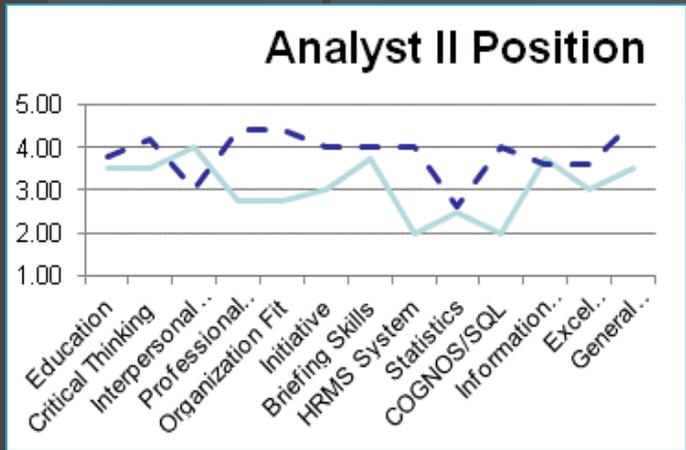
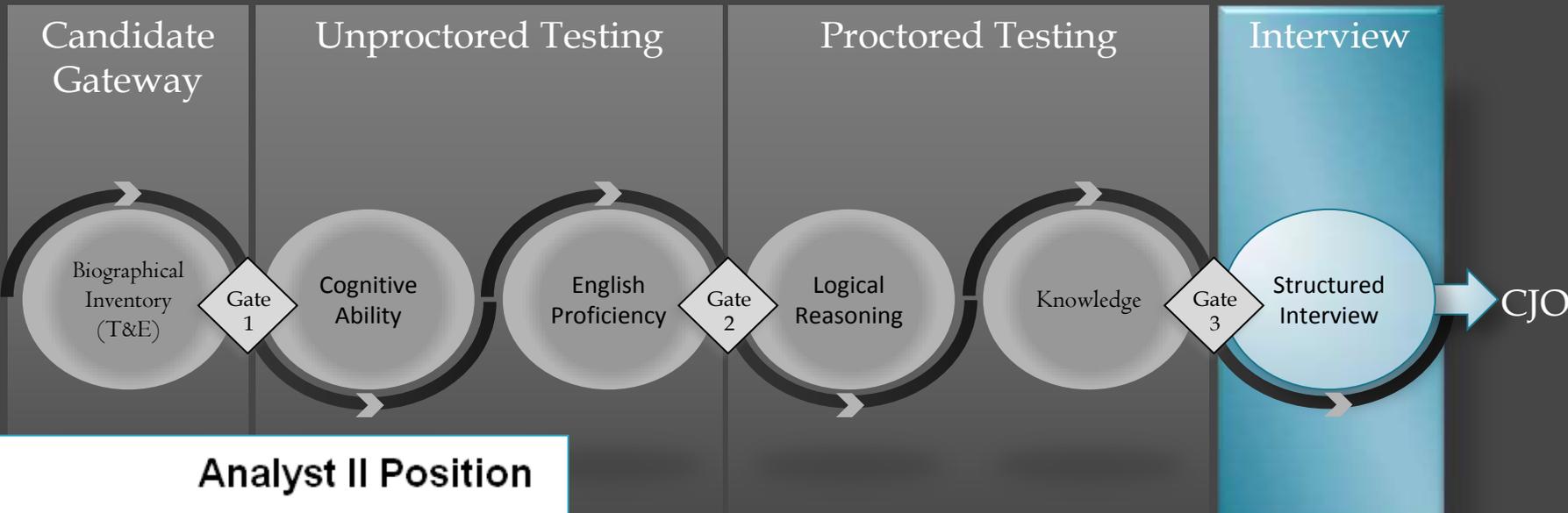
The following was given as a requirement for a new interactive system:

The system should be designed so that it will run fast.

Which of the following best describes this requirement?

- (A) It is a valid requirement and need not be rewritten
- (B) It should be rewritten because it is incorrect
- (C) It should be rewritten because it is inconsistent
- (D) It should be rewritten because it is unverifiable
- (E) It should be deleted because it will be too difficult to achieve

Structured Interviews



Structured Interviews

- Standardization ensures fairness and uniform opportunity to respond
- Standardization and job relevance help us identify the best overall candidate

Implementation

Assessments are Easy!!! Implementation is Hard!!!

Technology Concerns

- Database design and management
- Assessment tool and mode selection
- Operating systems
- Security
- Administration, scoring and reporting logistics & usability

People Concerns

- Impact on candidates
 - Engaged versus discouraged
- Impact on HR
 - Redefines recruiting/staffing process
 - Requires investment in assessments
- Impact on mission
 - Training for HM and stakeholders

Successful implementation

- ▣ Clear project management
- ▣ Flexible project management
- ▣ Prioritize usability
- ▣ Define roles & responsibilities
- ▣ Communicate clearly and often
- ▣ Train, train, train
- ▣ Evaluate processes and procedures



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