Use of Project Charters to Identify & Control Construction Hazards

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Charters

- A grant of authority or rights with explicit acknowledgement of the prerogative of recipient to exercise rights
  - Implicitly accepts hierarchy
  - Formal/written
- Emerged from European tradition
  - Magna Carta
  - Christopher Columbus

Project Charters

- A written (formal) statement of scope & objectives
- Developed by owner (customer) and organizations providing services and products (key stakeholders)
- To ensure:
  - Necessary resources and management commitment
  - Common understanding of:
    - Purpose of project
    - Roles and responsibilities
    - Constraints
    - Means of resolving issues

Project Charters

- An emerging practice to address inefficiencies and ineffectiveness of project delivery methods
- No single or authoritative source of best practices
  - Industrialized countries
  - Projects of all types
- Construction applications of specific interest

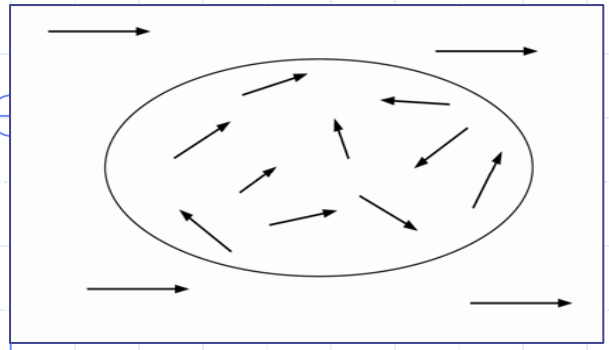
Charters, Partnering, Collaboration

- Global
  - 1991, In search of Partnering Excellence, Construction Industry Institute – a definition & report of 27 case studies
  - 1995, Trusting the Team: The Best Practice Guide to Partnering in Construction, Reading Construction Forum – guidelines for developing the charter
  - 1998, Seven Pillars of Partnering, RCF, Center for Strategic Studies in Construction
  - 1996, Partnering Guide for Environmental Missions of the Airforce, Army, Navy, Tri-Service Committee, US Gov't
  - 1999, Partnering, incorporating safety management, Matthews & Rowlinson, Engineering, Construction and Architectural Management

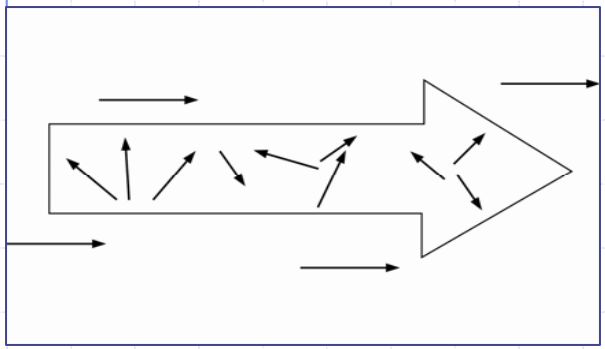
Charters, Partnering, Collaboration

- Local
  - 1993, Intel prompts joint venture, Technology Design & Construction (IDC/CH2M & Hoffman)
  - 1995, Intel (Facilities Construction) & TDC begin journey to Injury Free environments
  - 2001, Intel senior management articulates 11 goals for D1D fab @ Ronler Acres (included safety in design, environmental)
  - 2006, Next Generation Construction Summit – Optimizing Project Teamwork
  - 2007/08 – Greater Portland Construction Partnership – Project Charter Committee

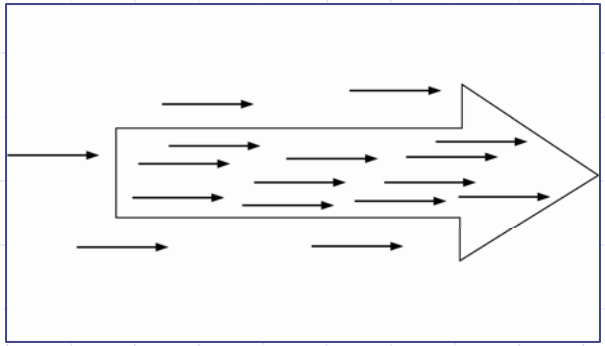
A Continuum of Project Alignment



Individual & organizational misalignment & conflicting sense of self-interest



Partial alignment but conflicts over self-interest and project interest



Closely aligned project where interdependent goals are acknowledged and accepted

Project Charters

- Created at the beginning – as soon as key stakeholders identified
  - Establishes collaboration and consensus on project goals & values
  - The process is at least as important as the document
- Lays foundation for how project
  - Is structured and managed
  - How change is controlled
  - How issues are resolved
- A communication tool that can be continually referenced
- Allows new team members to get familiarized & engaged

Project Charters

- Elements of a Project Charter (tools)
  - The Project Charter: Blueprint for Success, McKeever, CrossTalk, Journal of Defense Software Engineering, Jan 2006

    http://www.stsc.hill.af.mil/crosstalk/2006/01/0601McKeever.html
  - How to Write a Project Charter – Part 2, Taylor, The Project Management. Hut

    http://www.pmhut.com/how-to-write-a-project-charter-part-2
  - Project Delivery System : A System and Process for Benchmark Performance , CH2M Hill Project Managers, 2000

Project Charter Templates

- Texas Department of Information Resources
  www.dir.state.tx.us/pubs/framework/gate1/**projectcharter/template**.doc
- Microsoft
  http://office.microsoft.com/en-us/templates/TC011414181033.aspx
- US Department of Agriculture
  www.ocio.usda.gov/p_mgnt/doc/USDA_IT_PM_Guide_Appendix_102605.doc

Project Charters & Controlling Construction Hazards

- Clarification & explicit statement of values
  - People
  - Environment
- Establishment of clear communication structure
  - Responsibilities defined between and within organizations
  - Open & constructive feedback
- Commitment to **planning & integration of hazard identification in project delivery systems**

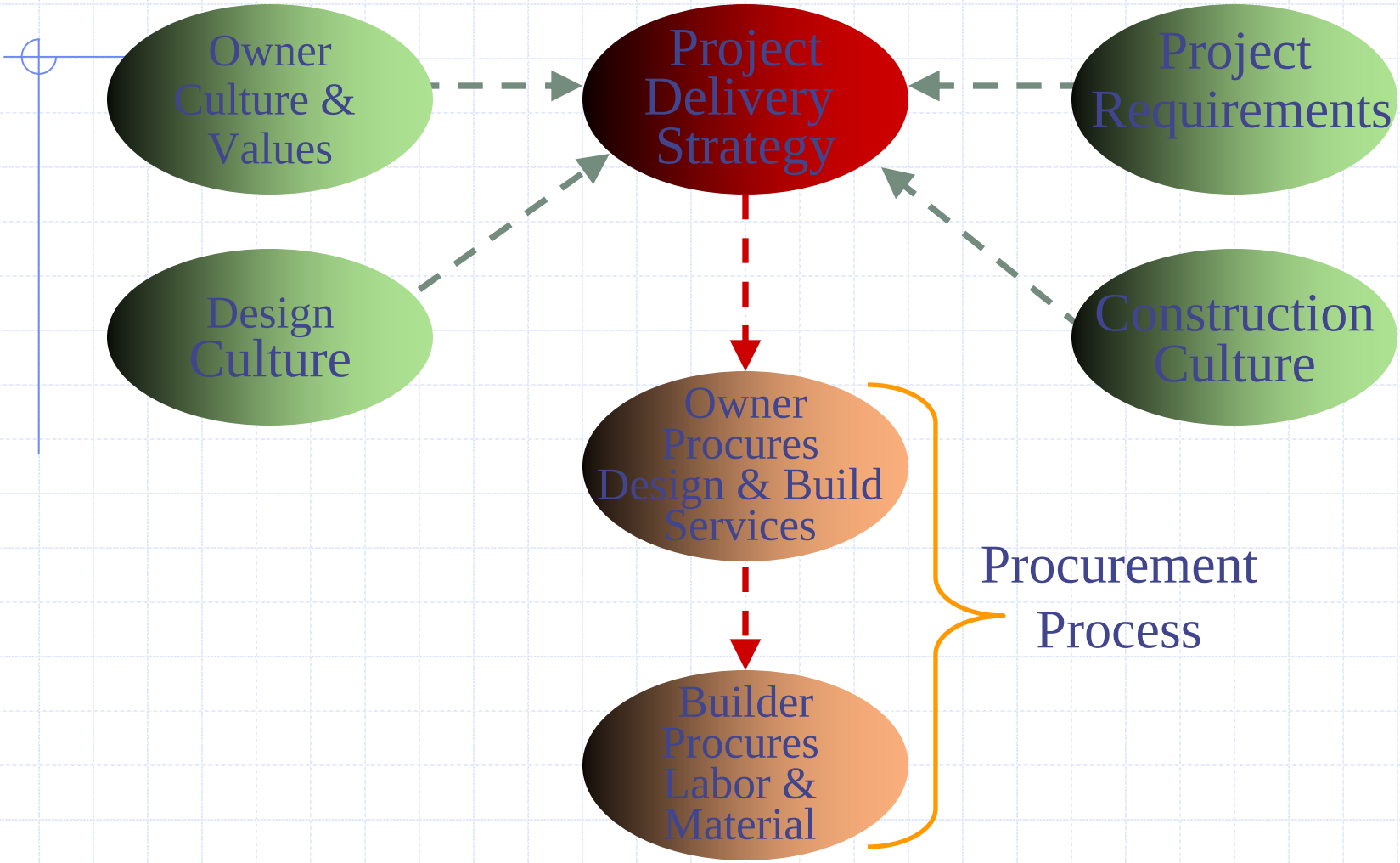
Hazard Identification and Project Delivery Systems

- PDS's – Interdependent management systems and subsystems for planning, executing and controlling construction projects
  - Project goals and scope development
  - Procurement strategies (A/E, CM/GC, Trade Contractors)
  - Design development
  - Schedule development
  - Cost control
  - Coordination & field communication
  - Commissioning/turnover
- Hypothesis – Fewer injuries result when conscious evaluation of hazards and potential unintended consequences are integrated into PDS's

Integration of Hazard ID into PDS's

- Comprehensive/traditional S&H programs have evolved to address recognized hazards
  - Necessary but not sufficient
- S&H must be integrated into each of the projects' subsystems in a conscious way
- Hazard recognition must become a reflection of project values and the individual organizations' practices
- We need real-time metrics for:
  - Mid-course adjustments to shift out of reactive mode
  - Increased focus on hazard recognition to find out early
  - Accountability – to point to a source to fix problems

Project Execution Model



Project Delivery Strategy

- Determines the desired relationships between Owner, Designer, and Builder(s)
- Establish what is Valued
  - Least Cost
  - Shortest Schedule
  - Highest Quality
  - Safest Delivery
  - Best Culture/Teamwork

"Traditional values" ?

"Non-traditional values" ?

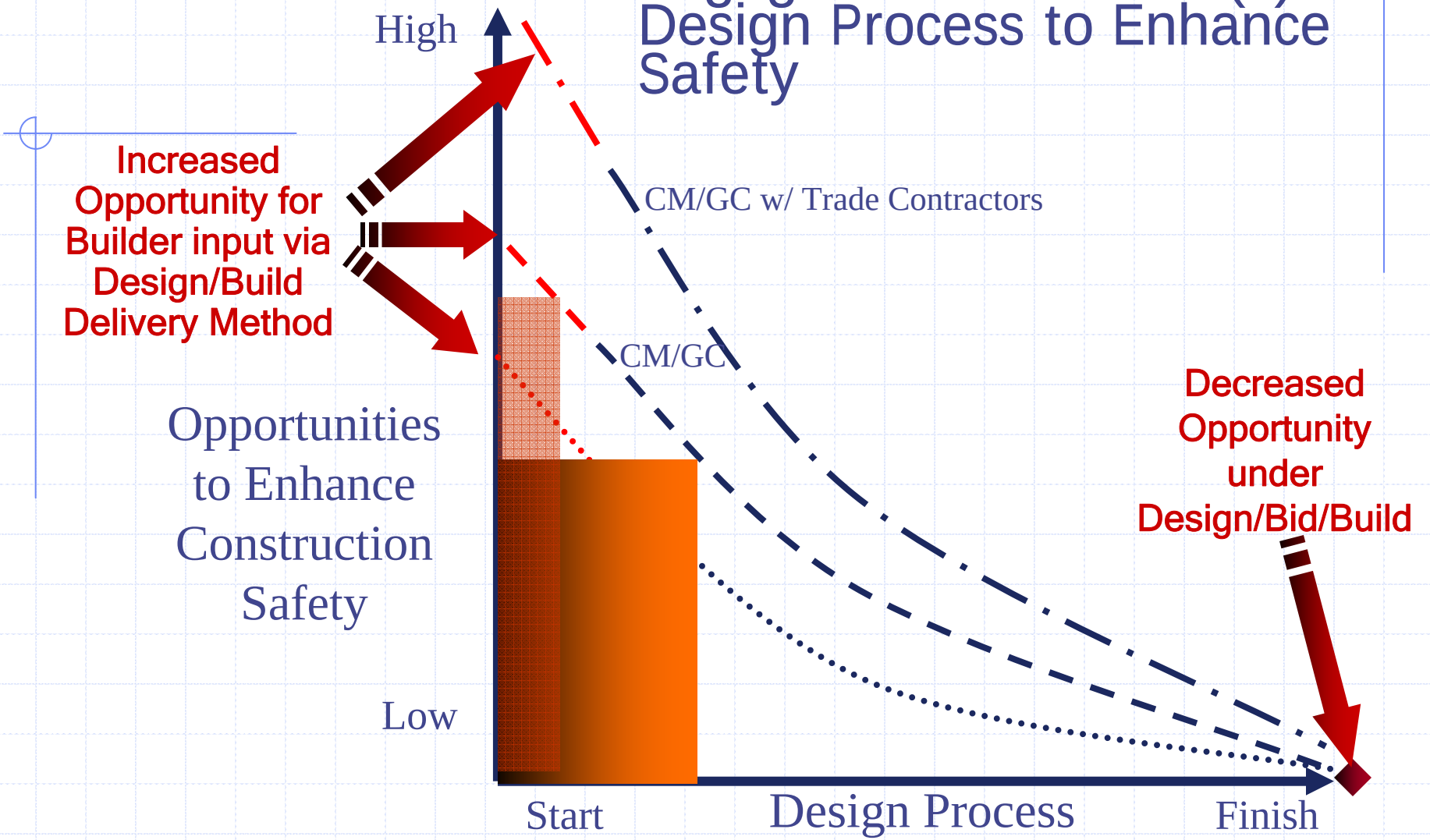
Function of Procurement

- Procurement Process
  - Owner determines the contracting method for Designer and Builder services
  - Designer and Builder determine the contracting methods for labor, material, and consultant services
- Provide Structure to Relationships
  - Formal (Contractual)
  - Informal (Non-contractual)

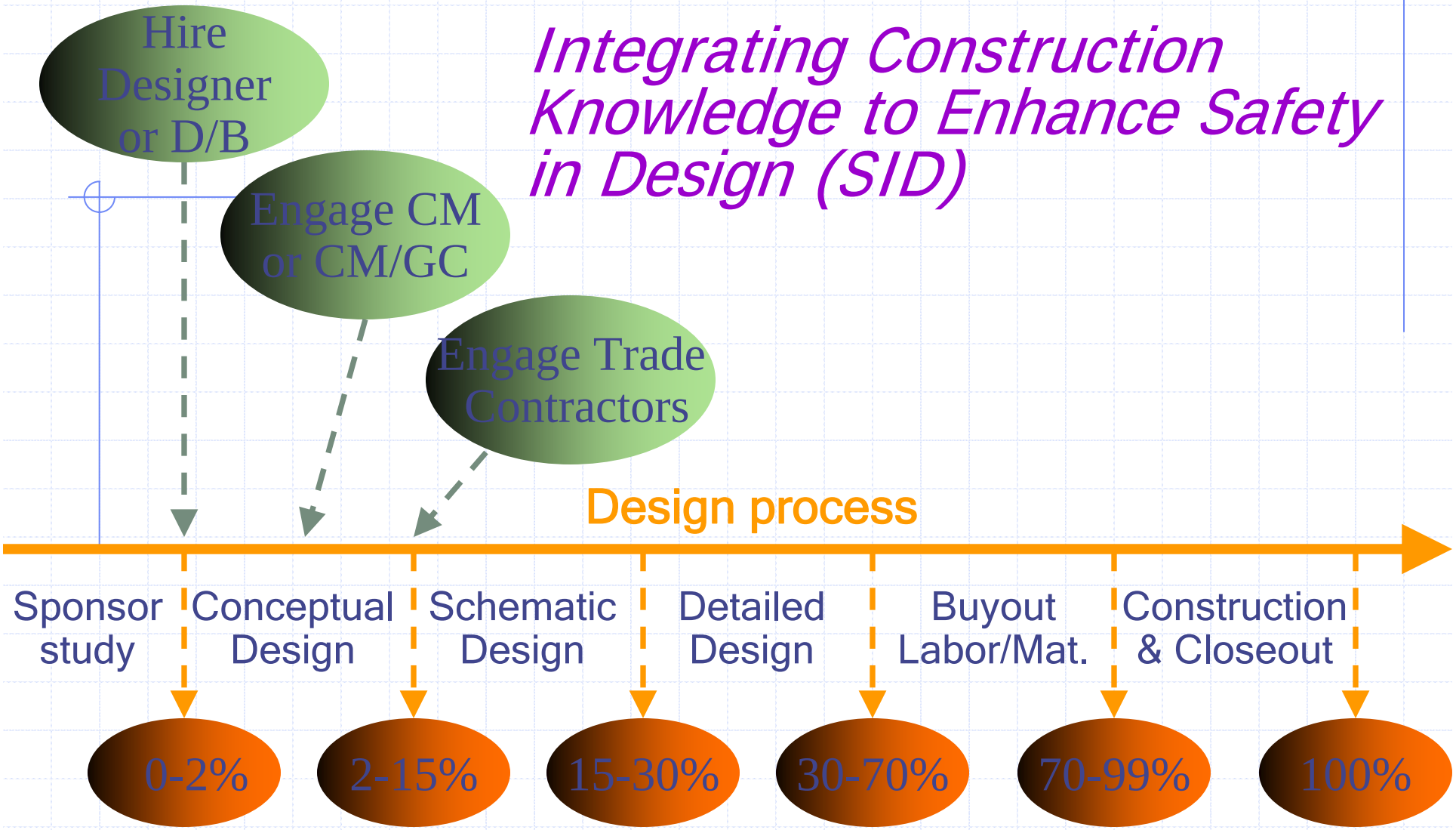
Function of Procurement (cont)

- Select Firms with Best Fit
  - Architects/Engineers
  - Construction Managers/General Contractors
  - Trade (Specialty) Contractors
- Support Owner Values/Project Goals
- Reveals Project Coherence (or not!)

Engagement of Builder(s) in Design Process to Enhance Safety



Integrating Construction Knowledge to Enhance Safety in Design (SID)



Key Considerations/Procurement

- Value of Construction Safety
  - Explicitly Stated at Project Onset
  - Integrated with Other Project Goals
- Procurement Process exists to Implement Project Delivery Strategy
  - RFPs & Contract Language can be used to explicitly stated goals of project expressed in project charter

Planning and Project Delivery Systems

Assumptions:

- Projects are delivered using a variety of interdependent systems involving making of decisions based on organizational criteria, available data and the experience of the individuals involved.
- These decision-making processes will result in fewer injuries when they include conscious evaluation of hazards and potential unintended consequences.

PLAN (n) vs PLAN (v)

Plan (noun)…Def (Webster's)

1. A drawing or diagram drawn on a plane
2. a. method for achieving an end
   b. often customary method of doing something
   c. detailed formulation of a program of action

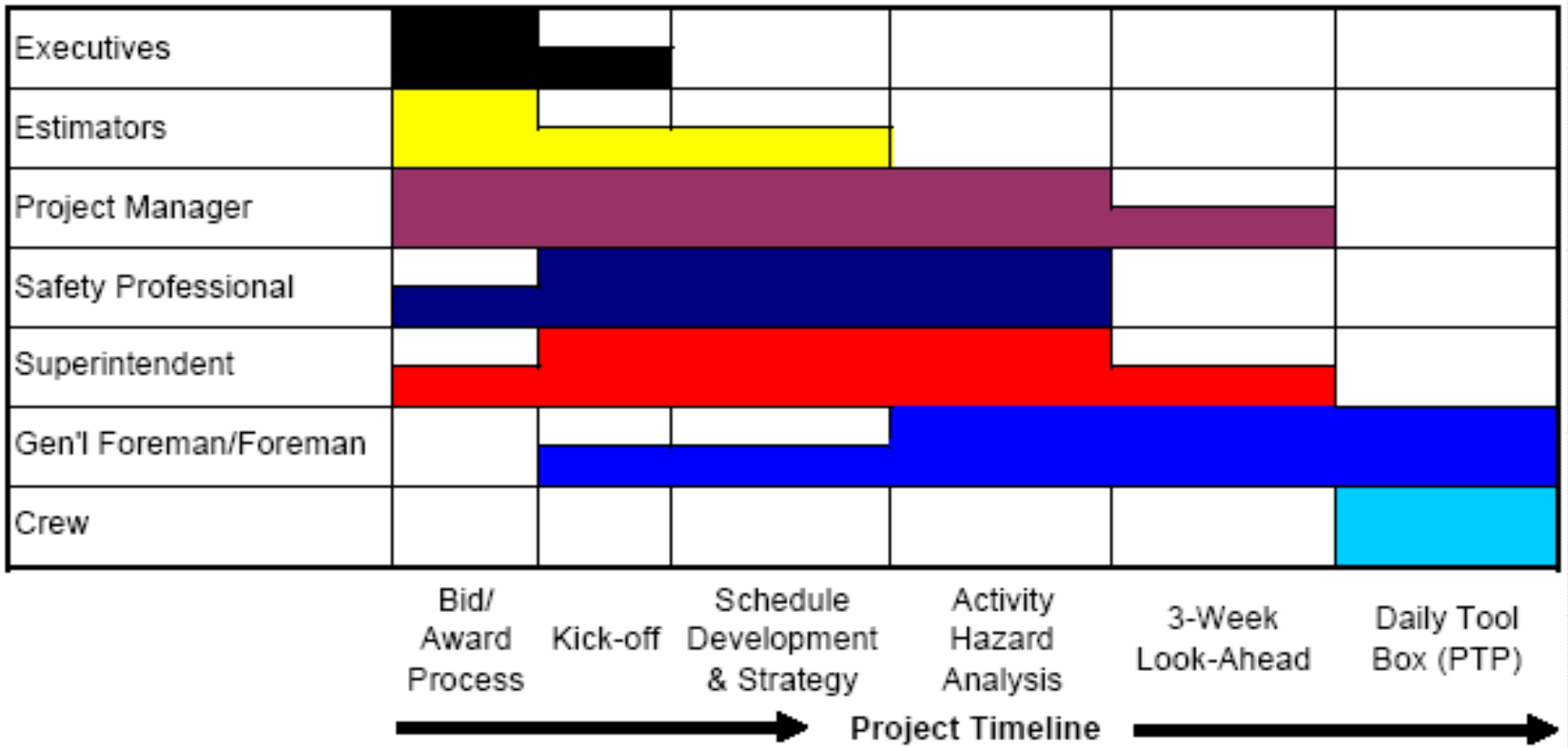
…***procedure, goal, design, plot, scheme***

Plan (verb)…Def (Webster's)

1. *arrange* the parts *of…design*
2. *devise* or *project* the realization or achievement of
3. *have* in mind/intend

Action…occurrence, mode of being…

Planning & Hazard ID Opportunities
A Trade Contractor Perspective



Note:
Fully blocked cell = Primary
Partial blocked cell = Secondary

Supporting Resources:
•Policies & Procedures
•Job Hazard Analyses

Figure 3. Project Milestones for Making Assumptions Explicit

Project Phase	Primary Organization	Primary Stakeholders
Environmental & Capacity Assessment	Owner/Developer	Stockholders, Suppliers, Customers
Need Statement & Preliminary Scope Definition	Owner/Developer	Stockholders, Suppliers, Customers
A&E and CM Strategy Defined	Owner/Developer	Stockholders, A & E, CM/GC
A&E Selected	Owner/Developer	A & E, CM/GC
CM Selected	Owner/Developer	A & E, CM/GC, Trade Contractors
Programming (A & E Scope)	A & E	Owner/Developer, CM/GC
Contracting Strategy Developed	CM/GC	Trade Contractors, Owner
Constructability Review & Pre-Job Planning	CM/GC	A & E, Trade Contractors, Owner
Development of R & R	Owner/Developer	A & E, CM/GC, Trade Contractors
Detailed Design Development	A & E	Owner, CM/GC, Trade Contractors
Schedule Definition	CM/GC	Trade Contractors, Owner
Contractor Selection (Procurement/Buy-out)	CM/GC	Trade Contractors, Owner
Processes Clarified (Staffing, Roles & Responsibilities)	CM/GC	Trade Contractors, Owner, A & E, Labor
Project Execution	CM/GC	Trade Contractors, Owner, Labor