Integrated Project Delivery

BIM – Integrated Practice vs Integrated Design

"You need to prepare yourself for a profession that you're not going to recognize in a decade from now, that the next generation is going to occupy. Our work begins with desire, initiated by us as architects not only in response to our clients, but in response to something much more active and engaged."

Thom Mayne FAIA *Morphosis, Santa Monica, CA, 2005*

BIM – Integrated Practice vs Integrated Design

- **More than simply an "integrated design process"**
- **It has to embrace the practice of architecture in fresher ways**

- **Integrated Practice** is:

  - About a truly **collaborative design process**, construction and life-cycle management of buildings.
  - **Embracing internal change** by forging teambuilding that is driven by other values
  - Involving project planning, communication, risk management, and implementation in 4D and 5D **in a comprehensive and open manner**
  - **Utilization of new tools** such as Building Information Modeling

BIM – Integrated Practice vs Integrated Design

The Big "Hand Off"

- Program handed off
- Design handed off
- 2D Software promotes hand off – continuity difficult
- Contract documents handed off
- Construction administration handed off
- Commissioning and start up handed off

BIM – Integrated Practice vs Integrated Design

The Big "Shift"

- Program Integrated at all levels
- Design Integrated at all levels
- BIM Software promotes Integrated at all levels
- Contract documents Integrated at all levels
- Construction administration Integrated at all levels
- Commissioning and start up Integrated at all levels

Evolution of Design Technology: Age of Paper

	Age of Paper
Technology	Electronic Drafting (CAD)
Scale	Building → Product
Representation	Paper
Content	Paper, Content Catalogs via Web
Analysis	Anecdotal applications with limited interoperability
Validation	Analog forms, checklists and notebooks

Evolution of Design Technology: Age of Models

	Age of Paper	Age of Models
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Content	Paper, Content Catalogs via Web	Models, Content Libraries + Characteristics
Analysis	Anecdotal applications with limited interoperability	Core model data to analysis engines
Validation	Analog forms, checklists and notebooks	Published templates

Evolution of Design Technology: Age of Integration

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"Not Much"

Design Bid Build

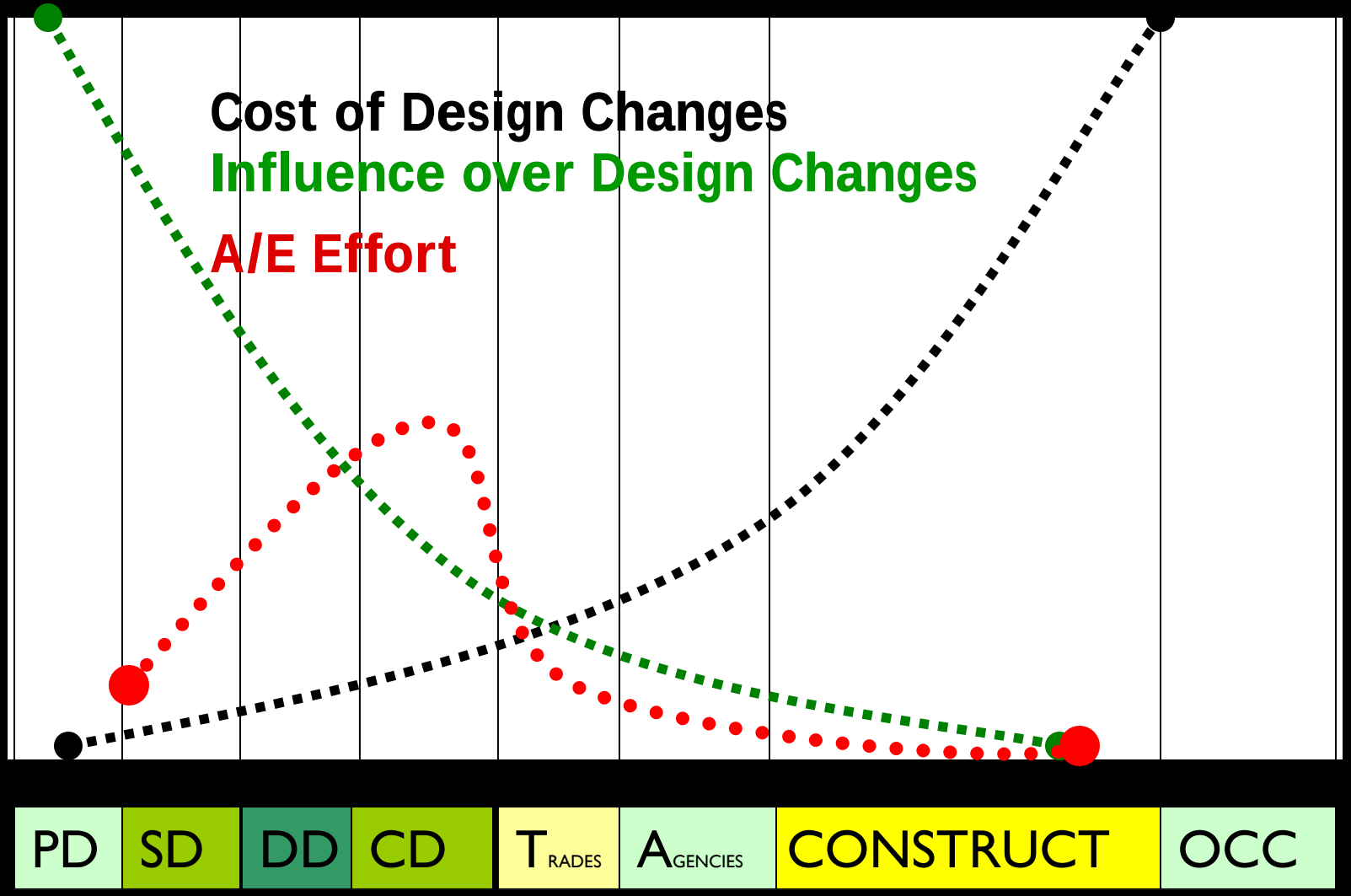
Transition to Integrated Practice

"Lots"

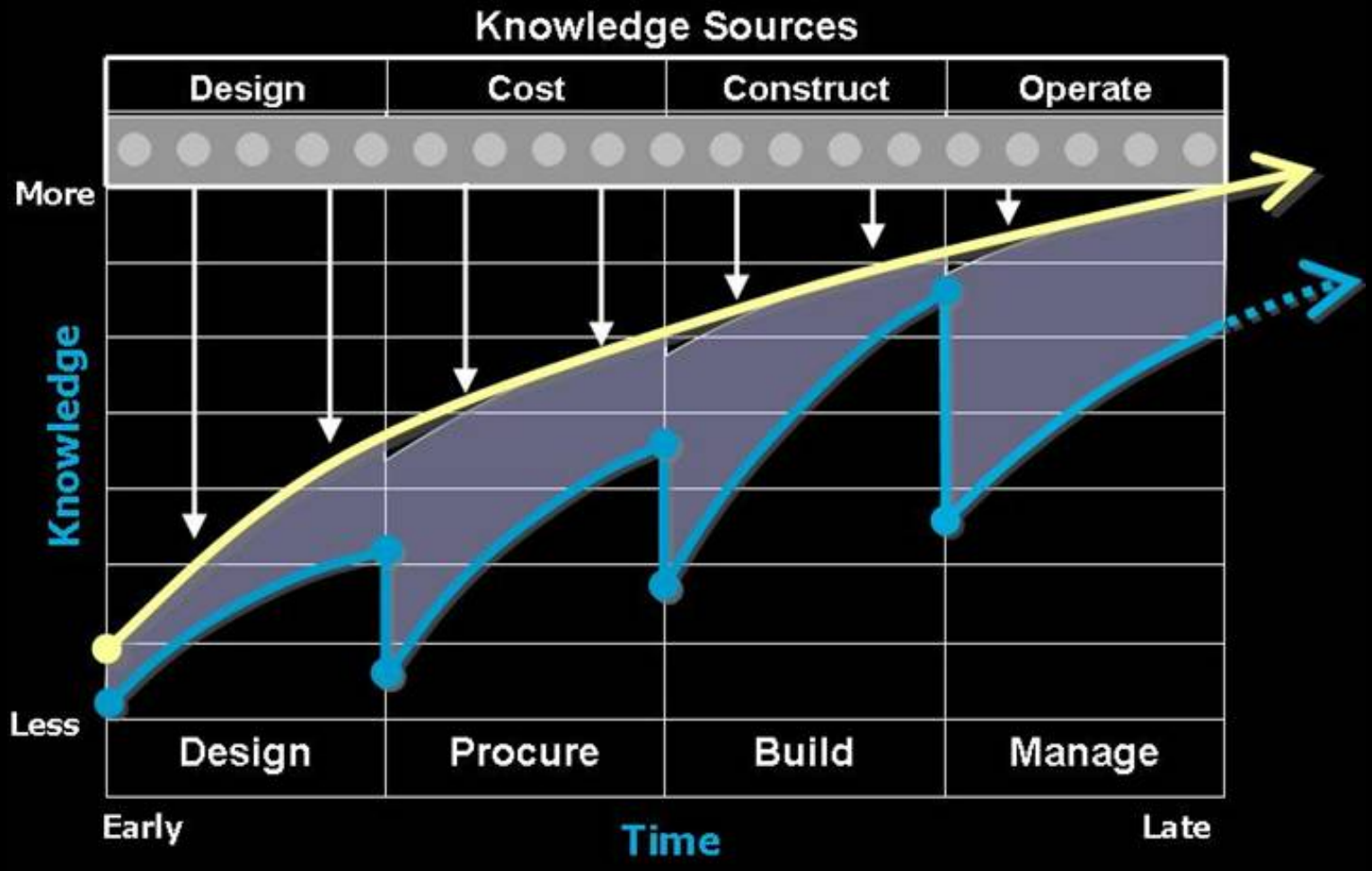
"Project Alliance"

Historical	Incremental	Organic
Traditional Dwgs	BIM -> Dwgs	Shared BIM
FedEx	Project Website	Digital Docs Mngt
FTP sites	Digtal	Online Collab
E-mail	Visualization	CNC Fabrication
DWG exchange	Early Fabrication	Digital FM

Cost Impact of Design Changes



Traditional Workflow



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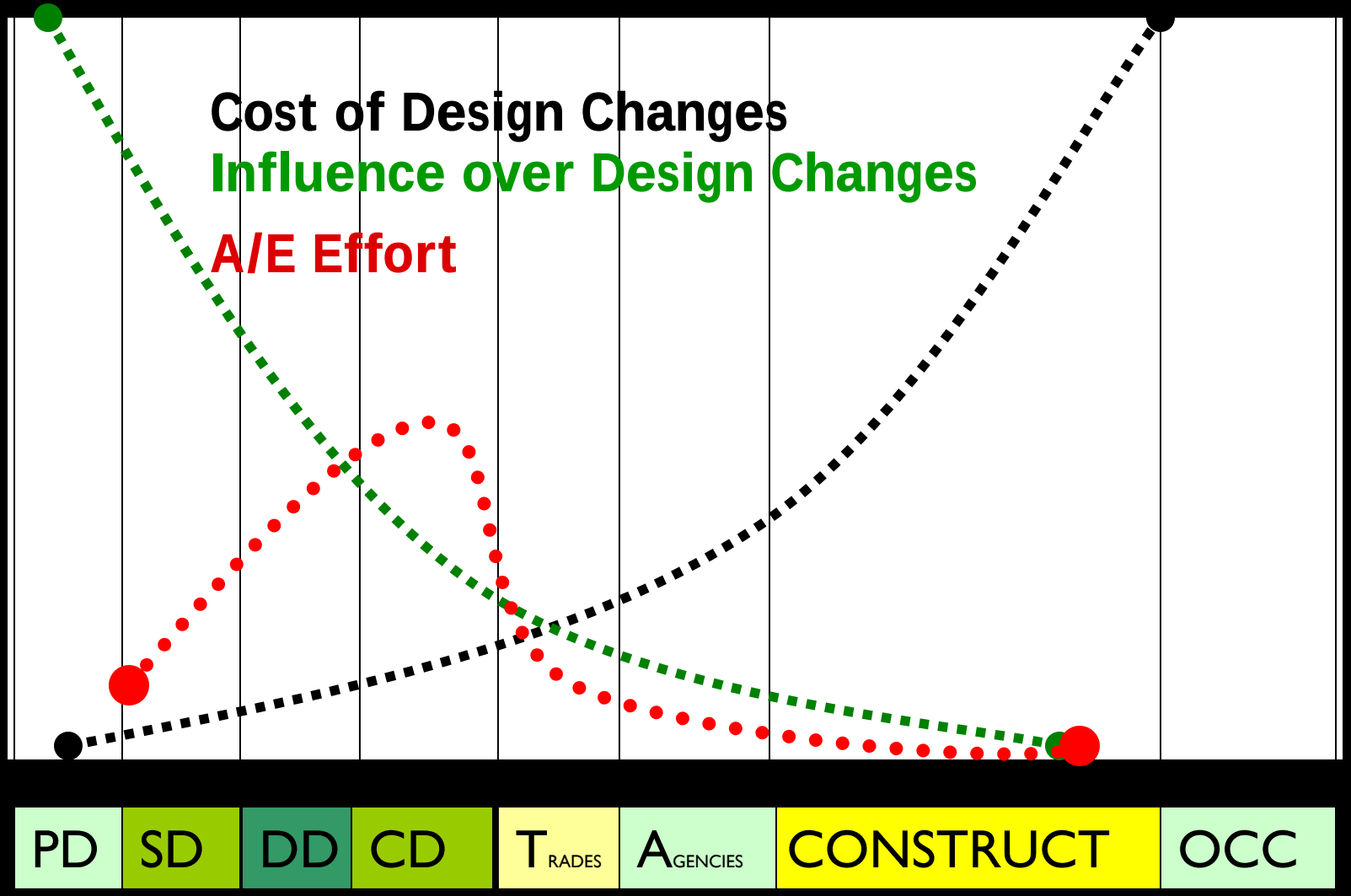

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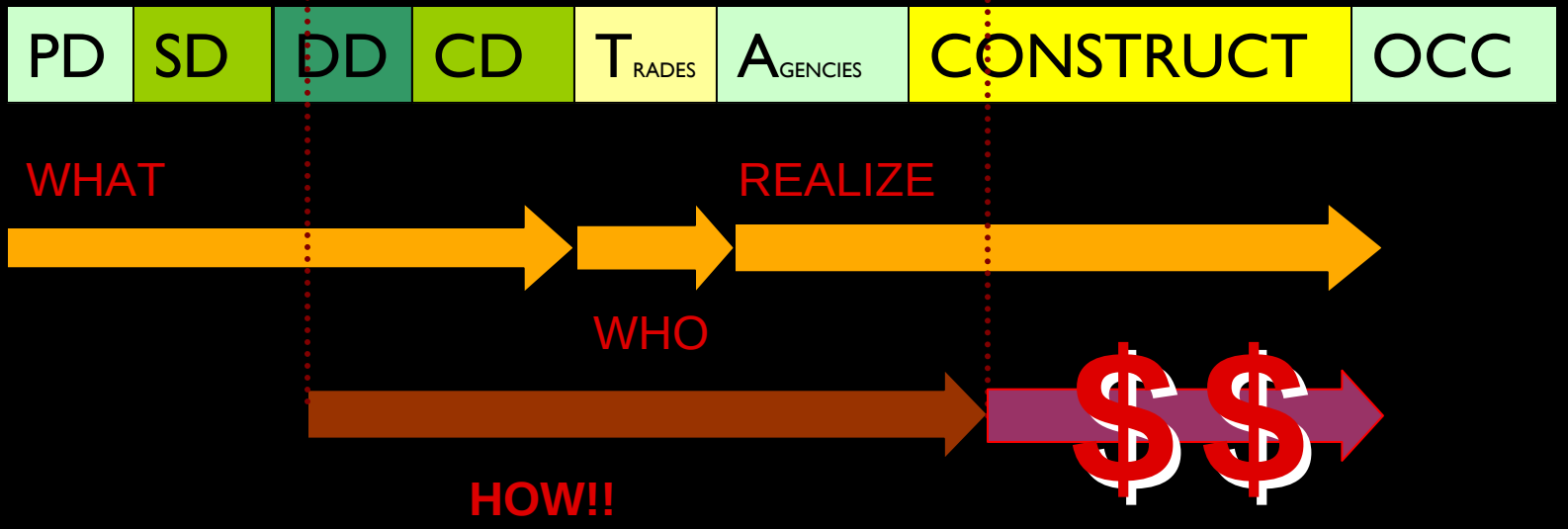
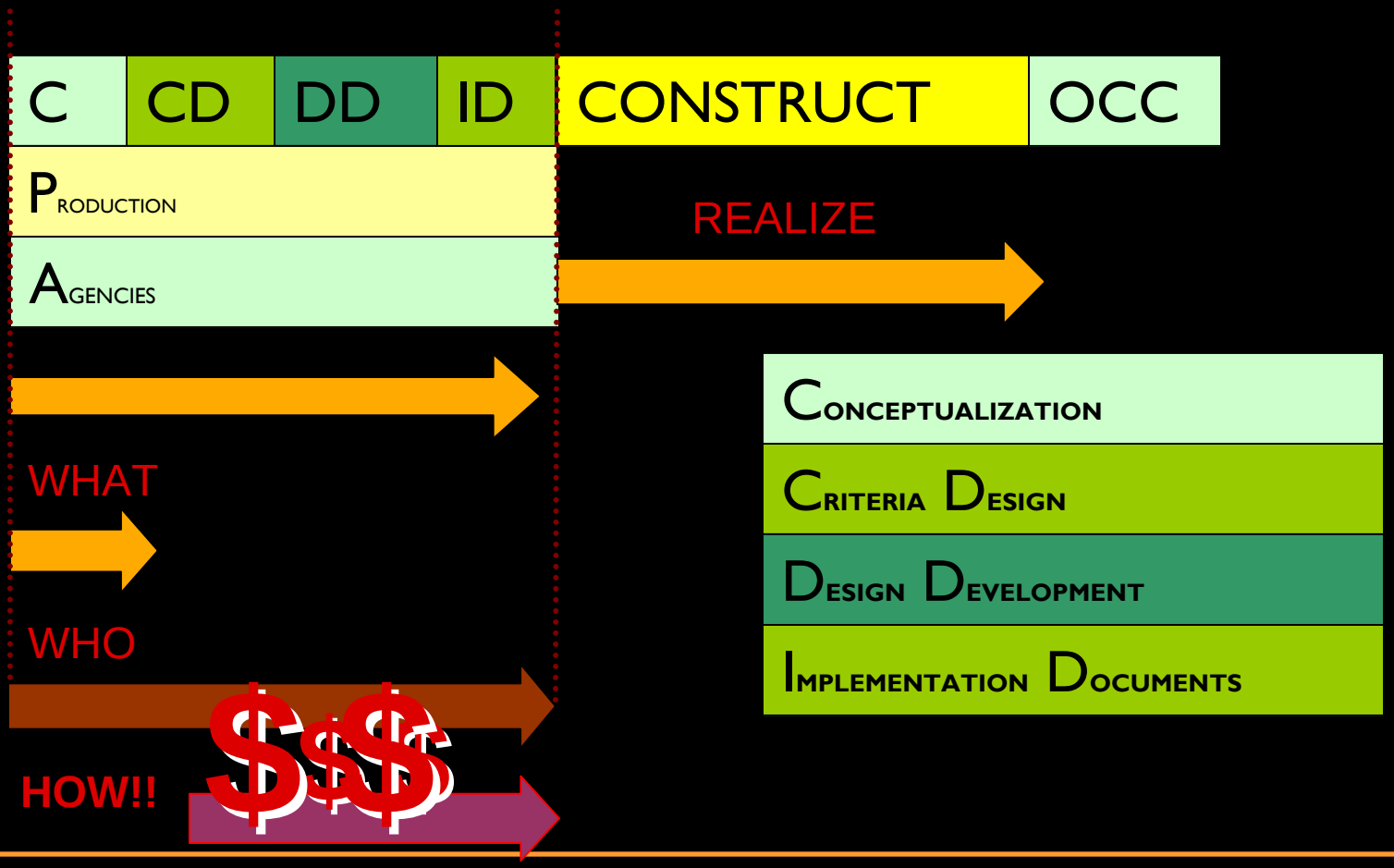


Integrated Workflow (www.aia.org)



Topic: Integrated Project Delivery

Presenter: Allan Partridge

Questions