

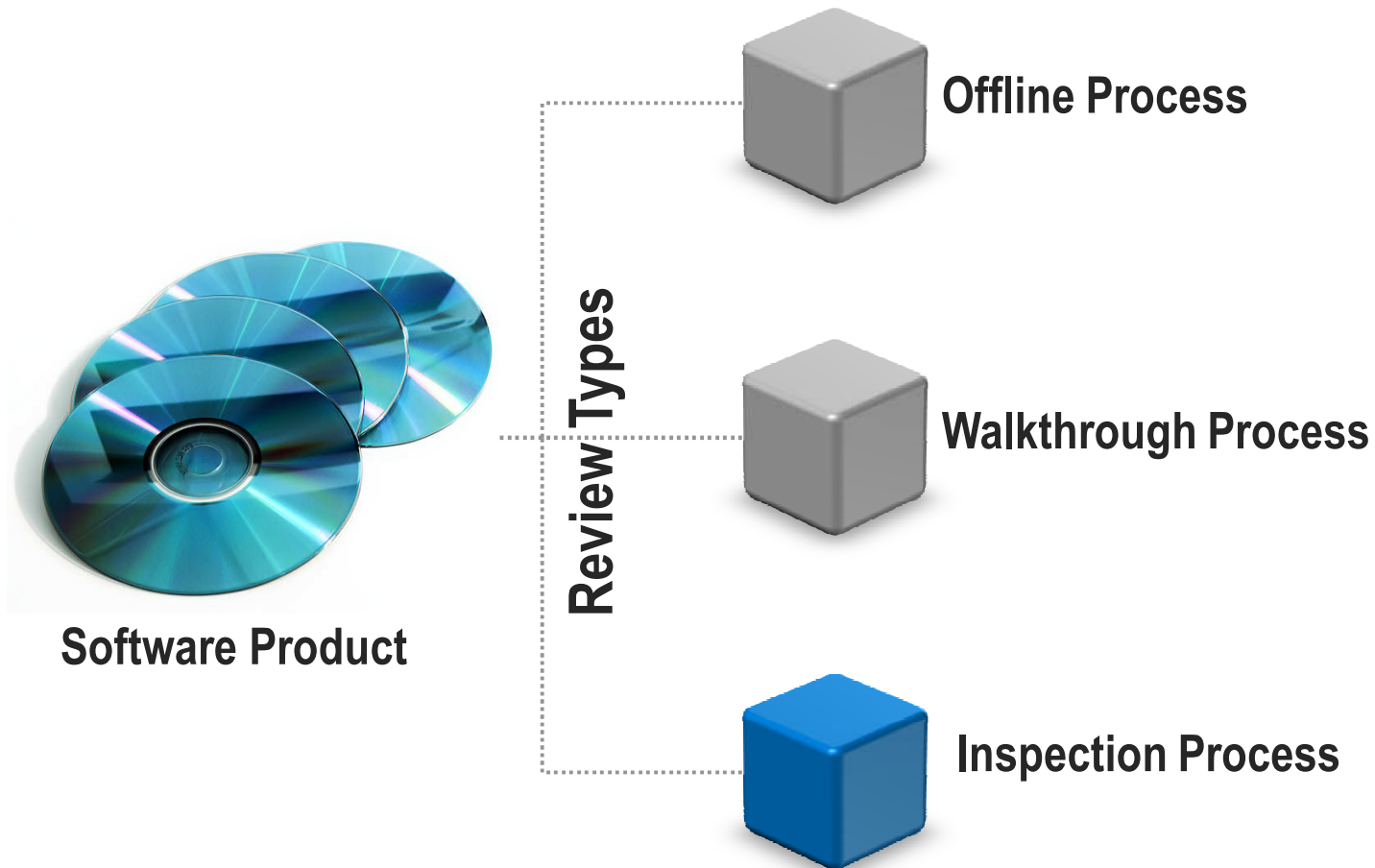
Fagan Inspection

Learning Bites

- Identify the different types of review process
- Describe what Fagan Inspection is and why it is needed
- Learn and understand the inspection process and its characteristics
- Identify who are involved and their roles in inspection, and
- Explore why inspections are rarely performed



The Review Types and Process



What is Fagan Inspection?

- Invented in the early '70s by Michael Fagan of IBM
 - Inspired by production engineering inspection
- A widely applicable, rigorous and formal software *engineering* QC technique
 - Inspection of any document when it is believed *complete and ready for use*
 - Find defects directly – unlike testing, which happens later, and only reveals symptoms
- Related to, but distinct from, walkthroughs, technical reviews, 'buddy checking', email 'pass around' or 'postal' reviews
- One of the 'catalyst' processes...



What is a Defect?



- Any occurrence in a work product that is incomplete, incorrect, or missing.
- Any instance which a requirement is not satisfied.
- Informal synonyms: bug, fault, issue, problem.
- Non-conformance in requirements, standards, or exit criteria.
- Identified by team consensus during inspection meeting based on requirements/standards.

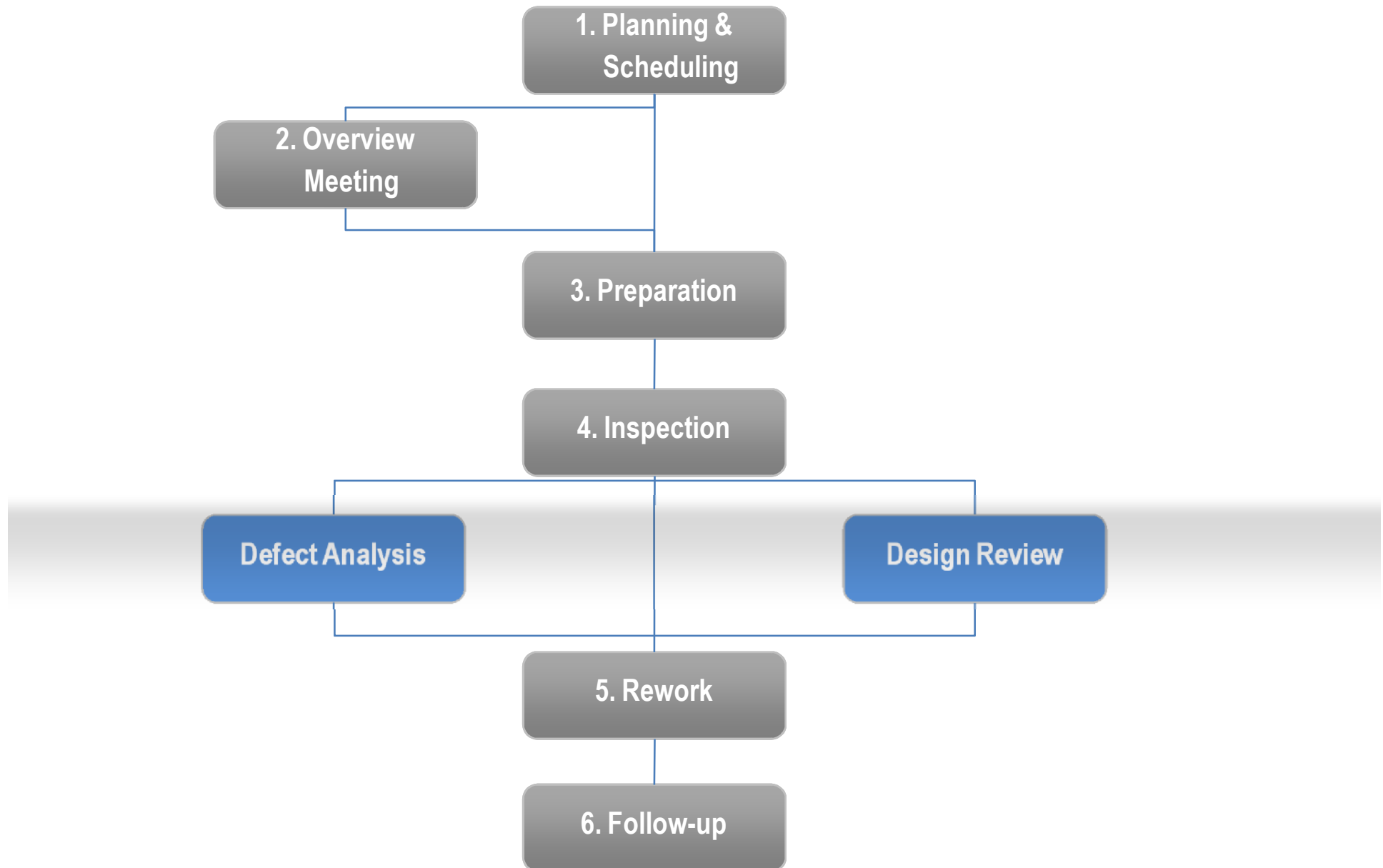


Why Fagan Inspection?



- Very high defect detection effectiveness – **the single most effective software quality control**
- Widely applicable – to all documents – developed, changed or acquired
- Can be used early in development (to requirements. docs.) and throughout development work
- Well documented track record of reduction in rework costs and defects in released software

The Inspection Process



Inspection Characteristics

- Budgeted, planned and scheduled
- Use a defined process
- Use knowledgeable peers...
- ... trained to perform defined inspection roles
 - Have defined entry and exit criteria
 - Use checklists and standards
 - Primary purpose is to find defects, for removal



Who are involved?

Reader

An inspector who guides the examination of the product

Moderator

An inspector responsible for organizing and reporting on inspection

Author

Developer of work product

Reader

An inspector who enters all the defects found on the defect list

Inspector

Member of inspection team. Often chosen to represent specific role-designer, tester, technical writer, SQA, etc.



Why are inspections rarely used?

- **Professional Ignorance**
 - Not heard of them (why?)
 - Assumed to be a synonym for 'review'
- **Organizational Ignorance**
 - Culture works against revealing or admitting mistakes (pass around for 'comment')
 - Lack of resources and facilities
- **Difficult**
 - Inspection is a 'precision instrument' – easily broken
- **Disappointment and Frustration**
 - With disappointing or apparently disappointing results and outcomes
- **Benefits are intangible**
 - Needs analysis of results and outcomes to appreciate time and money saved



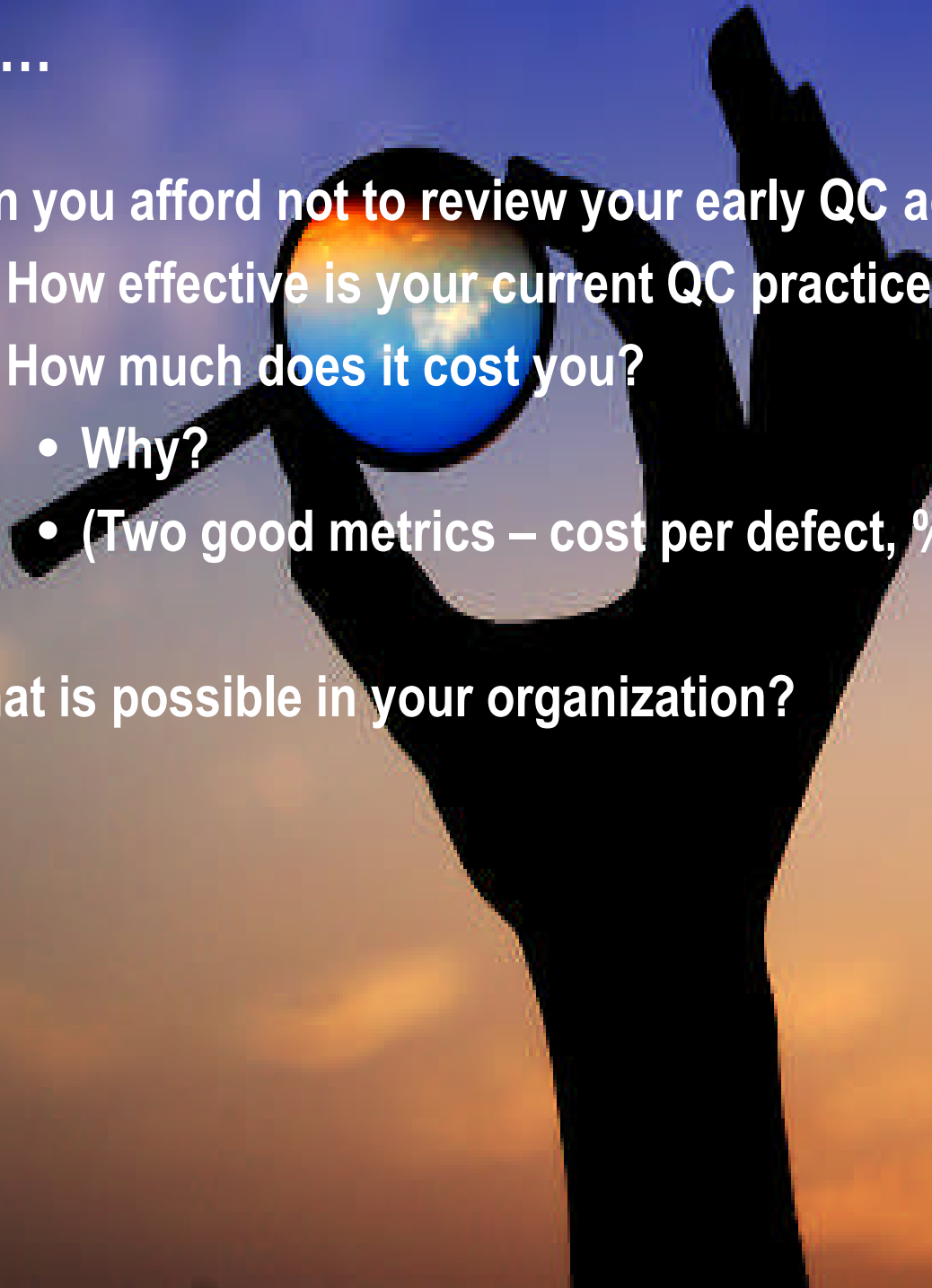
How to make Fagan Inspection work

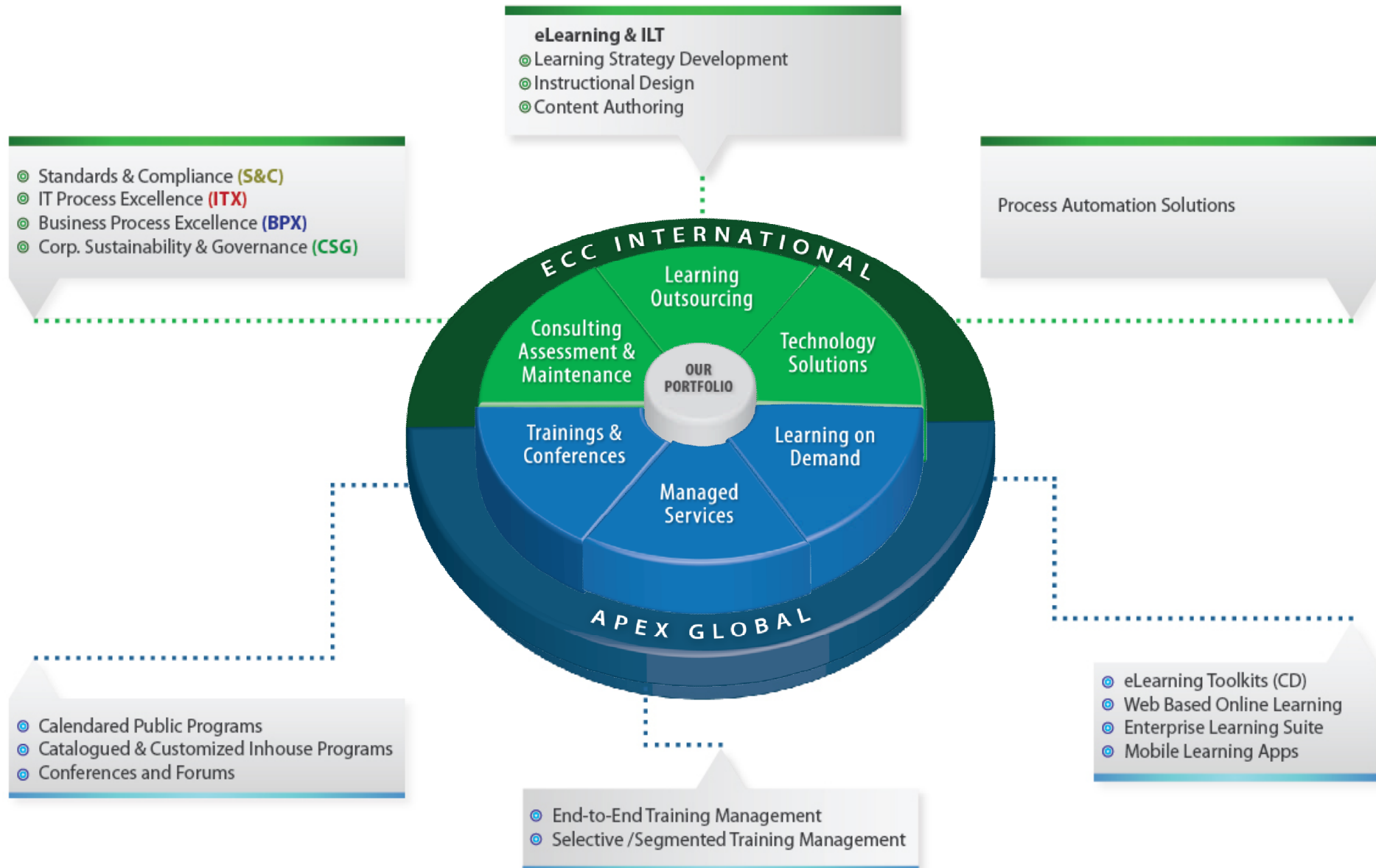
- **Restore balance outputs in originators favor (and add value)**
 - Not just defects (i.e. 'mistakes ') – formally recognize, value and measure design excellence
- **Begin the process as an introduction to real inspections**
 - Attractive and fashionable?
 - Complex and conflicts with standard advice – pilot the real standard process, then tailor when well understood
- **Make the benefits tangible**
 - Inspection data capture
 - Use this to provide savings predictions as part of project planning
 - Wider internal reporting and promotion



Finally...

- Can you afford not to review your early QC activities?
 - How effective is your current QC practice?
 - How much does it cost you?
 - Why?
 - (Two good metrics – cost per defect, % rework)
- What is possible in your organization?





Thank you very much!

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