LECTURE 4

Welcome, Enterprise Architects

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In This Lecture

- Competencies and occupation of enterprise architects
- Enterprise architects in the context of enterprise architecture practice
- Enterprise architects as internal consultants
- Enterprise architects at work during the initial ideation of initiatives and different phases of their implementation
- The two hats of Technology Experts and Change Agents worn by enterprise architects in organizations

Enterprise Architects

- **Enterprise architects** are specialized professionals responsible for *leading* architectural planning in organizations, thereby enabling their digitalization

- Enterprise architects are widely recognized as the agents of digital transformation

- Presently, enterprise architects are prevalent across the industry and form a distinct professional community

- Enterprise architects constitute a large family of kindred organizational positions with similar duties containing the keyword "architect" in their titles

Competencies of Enterprise Architects

- Enterprise architects combine an exotic blend of expertise and skills, which is hard to delineate precisely

- A partial list of their capabilities includes:

  - A comprehension of the external IT environment with the ability to pick the most suitable solutions for particular needs

  - An aptitude for communicating with business leaders with the skills to work out a common way forward for business and IT

  - An understanding of the internal IT landscape with the ability to integrate new information systems into this environment

  - Knowledge of the regulatory base with practical experience in designing compliant IT solutions

  - A grasp of the situation as a whole with the propensity for holistic decision-making

Occupation of Enterprise Architects

- Concrete actions, responsibilities and contacts of enterprise architects are also difficult to enumerate

- In their everyday work, architects:

  - Study the IT environment

  - Keep abreast of the evolving technology market

  - Advise others on various IT-related issues

  - Participate in digitalization initiatives as their chief planners

- By ensuring adequate architectural planning as part of digitalization efforts, architects unfold their potential and enable their success

Architects as Enablers of Digitalization

| Enterprise Architects		Architectural Planning		Digital Transformation
Specialized professionals competent in IT and able to drive its introduction in organizations	→ Lead	Designing technical solutions and reaching organizational solutions for digitalization efforts	→ Enables	Significant improvement or reinvention of business activities with the use of the latest advances in IT

Enterprise Architects as EA Practitioners

- Enterprise architects are practitioners of the discipline commonly known as **enterprise architecture (EA)**

- The EA discipline purports to address the problem of business and IT alignment in organizations by using special documents called EA artifacts

- **EA artifacts** describe various aspects of the relationship between business and IT and support architectural planning as part of digitalization initiatives

- Architects employ EA artifacts for communicating with stakeholders during architectural planning, capturing the resulting solutions and representing the produced plans
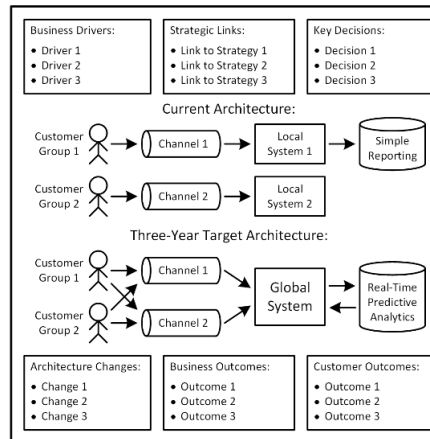
EA Artifacts for Different Initiatives
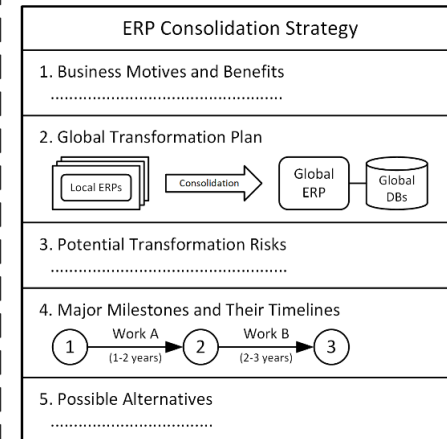

Solution Overviews
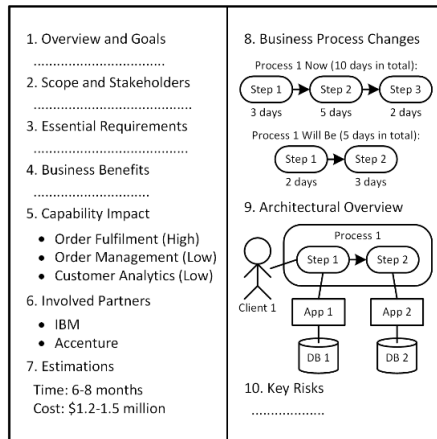
High-level descriptions of IT solutions with their logical components from a business viewpoint
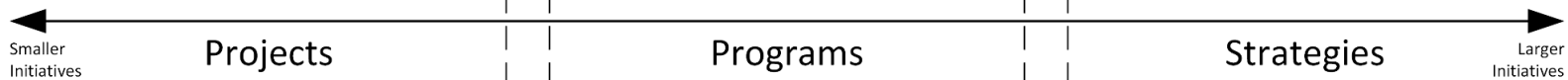
Target States

Abstract graphical depictions of the specific state of the organization in terms of business and IT

Architecture Strategies

Conceptual directions for the organization from the standpoint of business and IT alignment

Smaller Initiatives — **Projects** — **Programs** — **Strategies** — Larger Initiatives

Enterprise Architecture Practice

- An **EA practice** is an organizational practice of disciplined architectural planning using EA artifacts

- EA practices are embedded in organizations as one form of their legitimate decision-making mechanisms

- EA practices translate transformation drivers into architectural plans for digitalization initiatives

- Enterprise architects are the key actors of an EA practice and the principal owners of all EA artifacts

- An EA practice embraces various actors, software tools, planning processes and other arrangements integrated with regular administrative mechanisms

Architecture Governance Bodies

- **Architecture governance bodies** are decision-making committees responsible for carrying out governance procedures and endorsing architectural decisions

- Governance committees include enterprise architects with business and IT leaders to examine proposed planning decisions and sanction their implementation

- Governance committees with their procedures are institutionalized in organizations as part of their EA practices and pivotal for their functioning

Enterprise Architects in EA Practice
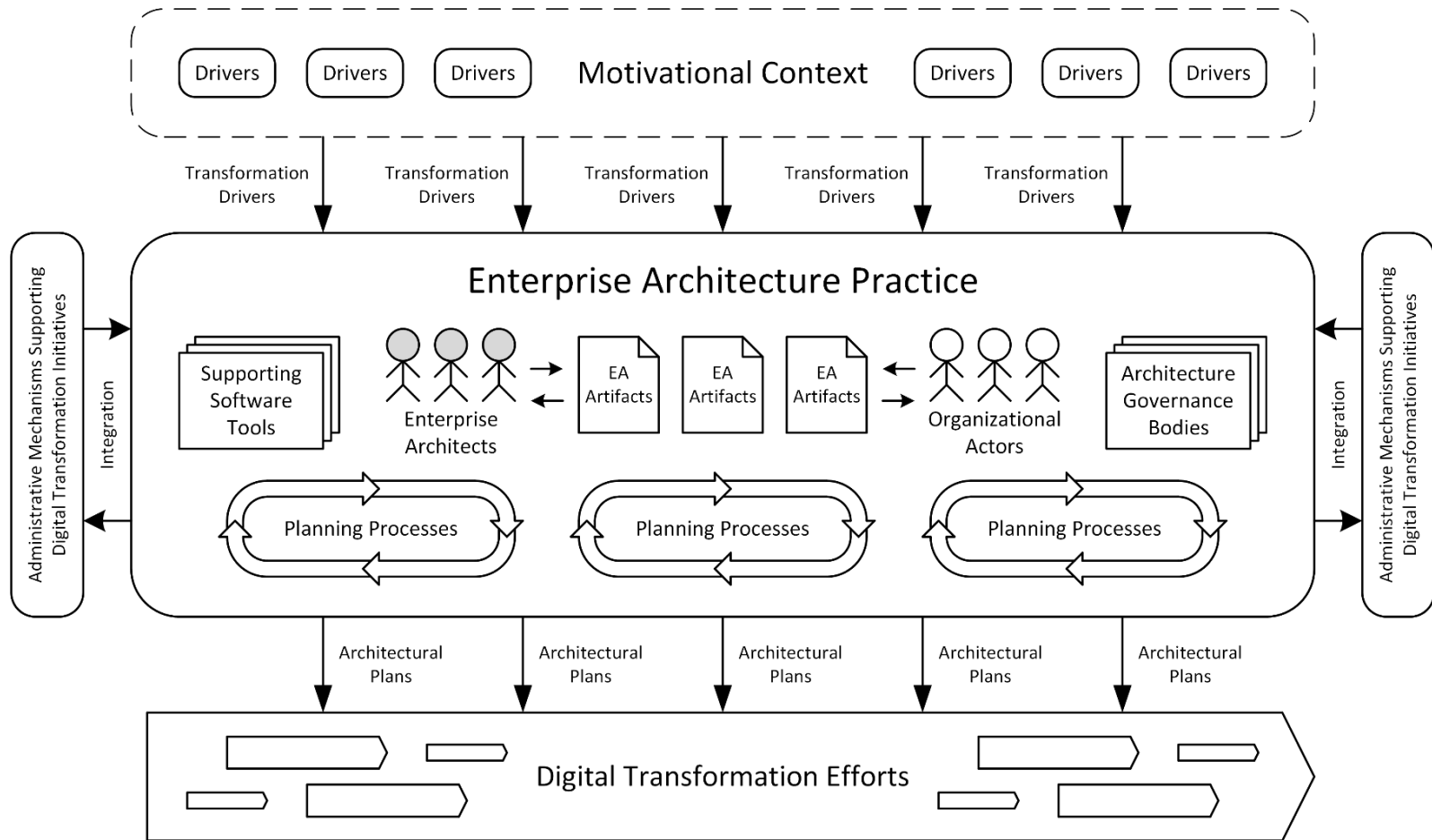
Specifics of Enterprise Architects

- Enterprise architects do not have any operational and managerial responsibilities, but act largely as experts

- Architects resemble *management consultants*, who provide advice, but bear little or no accountability

- A final say in decision-making belongs to real managers, whereas architects can only influence the resulting decisions by promoting their ideas

- The authority of enterprise architects in organizations can only be unofficial, based on their reputation

- Architects are called for help and invited to lead the architectural planning of initiatives by their sponsors

Voluntary and Mandatory Interactions

- **Voluntary interactions** with architects are initiated by managers at their will, according to their interests

- Voluntary interactions are not regulated formally and sought after because the participation of architects is considered advantageous by managers

- **Mandatory interactions** with architects are imposed by administrative procedures that require their presence, e.g. during the implementation of change initiatives

- Mandatory interactions are more formal and take place as part of institutionalized decision-making processes regardless of the will of their participants

Architects as Internal Consultants

Voluntary Interactions (Majority)
(Initiated personally by managers at their own will, based on their pragmatic interests)

Mandatory Interactions (Minority)
(Imposed administratively by decision procedures that require the presence of architects)

Enterprise Architects

Responsible Managers
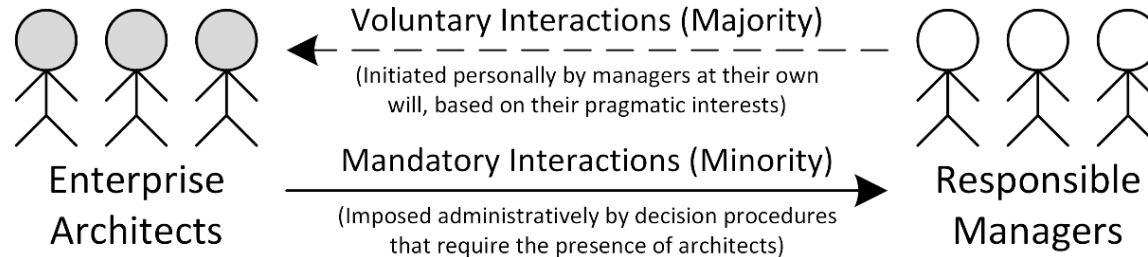
Authority: Informal, reputation-based, earned by own deeds and actions

Power: Mainly "soft" power exercised by persuasion and argumentation

Activities: Influence decisions mostly by making recommendations

Responsibility: Usually have little or no accountability for the results

Metaphor: Internal consultants

Authority: Official, managerial, granted to them by the organization

Power: Classic "hard" power exercised by orders and their enforcement

Activities: Make actual decisions, have a final say in decision-making

Responsibility: Directly accountable for the ultimate outcomes

Metaphor: Architects' customers

Enterprise Architects as City Planners

- Enterprise architects can be compared to *city planners*
- Organizations can be viewed as cities, where information systems correspond to individual buildings
- The commonalities between cities and organizations:
  - Both represent large, complex and self-evolving entities whose development is endless and cannot be planned in every detail
  - Both have multiple stakeholders, their future is determined by the interests of diverse constituencies, often conflicting ones
  - Both have some technical side for the means of their evolution as well as some "value" side for the ends of their evolution
- Enterprise architects have to cope with many of the same conceptual difficulties that city planners do

Differences from Traditional Architects

- The word "architect" does *not* indicate any similarity between enterprise architects and classic architects

- Unlike buildings, organizations are *not* static entities that can be carefully planned and then constructed

- Organizations resemble living organisms that gradually evolve as a result of countless planning decisions made every day by their managers at all corporate levels

- Organizational decisions often "happen" by virtue of coincidental circumstances, rather than get "made"

- No one can plan enterprises and their transformations in the same sense as traditional architects design buildings

How Do Enterprise Architects Work?

- Enterprise architects try to *influence decision-making processes* at different levels and stages to guide the evolution of the organization in the right direction

- Architects interact with stakeholders, understand their interests, propose the best mutually satisfactory way forward and then advocate adherence to this path

- The work of enterprise architects in organizations covers all logical stages of digitalization initiatives and begins even *before* any specific initiatives are articulated

- Their work starts with identifying motives for digitalization and converting them into the right initiatives and ends with planning and executing these initiatives

Work in Process of Initial Ideation

- First, architects cultivate their reputation as valuable business partners, gain informal authority and build up their communication network across the organization

- Being in contact with managers, architects dive into their motivational context and recognize their drivers

- Architects and managers collectively produce ideas for digitalization and then funnel these ideas into initiatives

- With the assistance of architects, autonomous initiatives are generated from drivers, whereas their derivative initiatives are spawned later from their intentions

Activities Resulting in New Initiatives
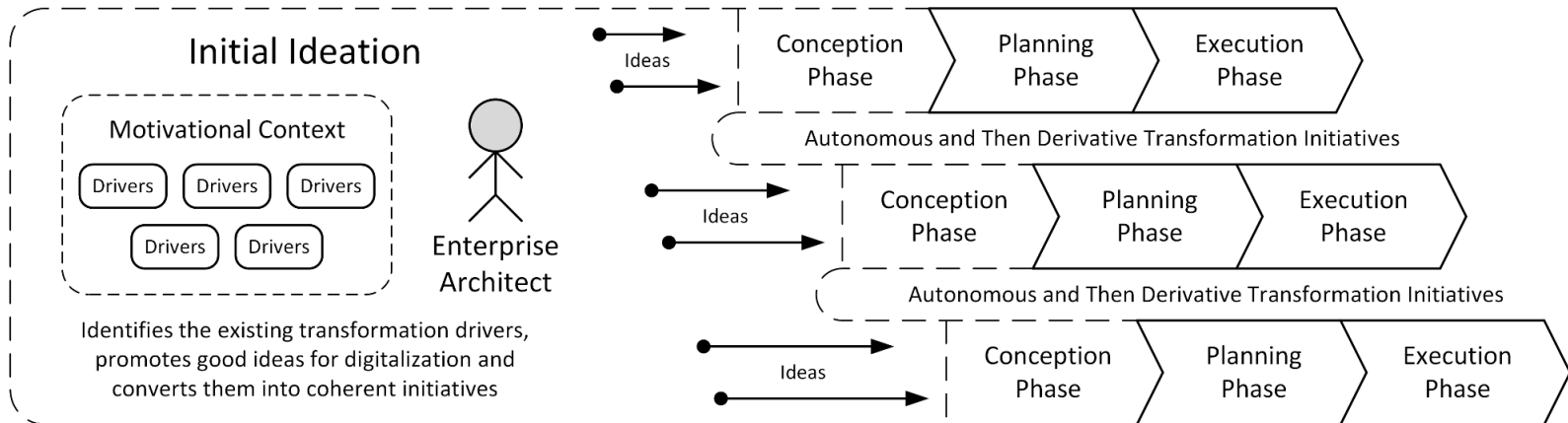
Work During Conception Phase

- Enterprise architects communicate with initiative sponsors to better understand what should be done and then formulate the concept of a new initiative

- Using their deep knowledge of IT, enterprise architects help initiative sponsors conceive the right initiatives

- Because these efforts imply marrying business ends and IT means and face the same familiar challenges, they can be regarded as **architectural pre-planning**

- The purpose of architectural pre-planning is to do a basic feasibility study, assure that satisfactory solutions *exist in principle* and outline their solution space

Architectural Pre-Planning
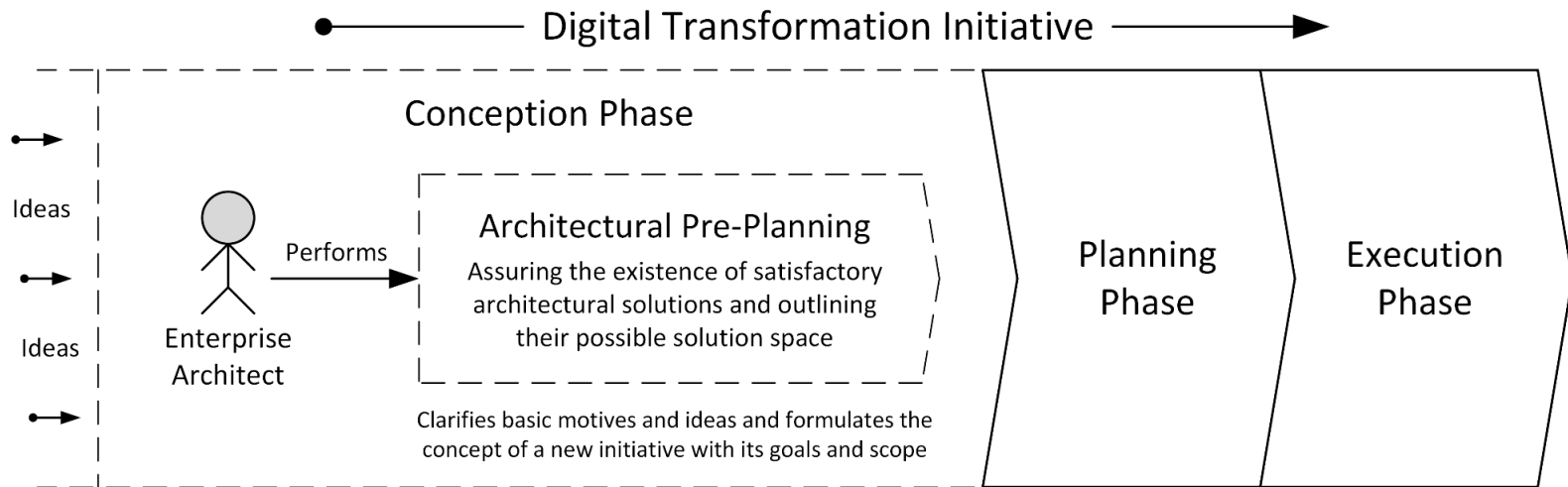
Work During Planning Phase

- The **architectural planning process** is a sequence of actions that should be accomplished to produce plans:

  - Discussion — communicating with all initiative stakeholders, studying their perspectives and collecting their thoughts

  - Elaboration — developing initial proposals, presenting these plans, gathering feedback, reacting to it and adjusting the plans

  - Approval — reaching agreement on the proposed course of action, completing the resulting plans and endorsing them

- Enterprise architects practice "planning by talking"

- To facilitate communication and represent architectural plans during different steps of the planning process, architects select and use suitable EA artifacts

Process of Architectural Planning

Planning Phase of a Digital Transformation Initiative

Architectural Planning

Enterprise Architect — Initiates →

Discussion
Talk with stakeholders to understand what each party wants to achieve

Elaboration
Present proposed plans to stakeholders, collect their feedback and react to it

Approval
Finalize the resulting plans and achieve their official endorsement by all parties

Produces → **Architectural Plans**

"Planning by Talking"

Work During Execution Phase

- In the execution phase, the role of architects switches to *chief supervisors*, who exercise architectural oversight over all the "downstream" decisions and actions

- **Architectural oversight** is the whole set of measures in an EA practice intended to ensure adherence to the approved plans for initiatives during their execution

- When exercising architectural oversight, architects become the proponents of the developed plans by reminding their stakeholders of the reached agreements

- By inducing, persuading and even enforcing the initiative executors to adhere to the existing plans, architects move the organization closer to the envisioned future

Activities in Key Phases of Initiatives
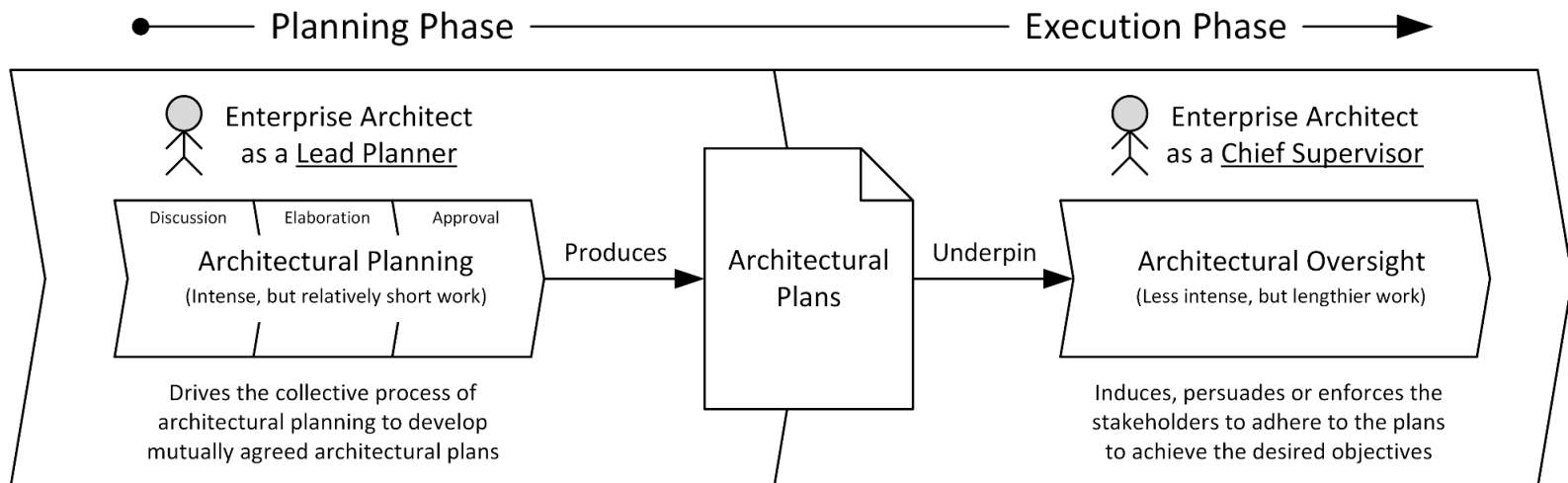
Agreed Plans Trump Perfect Plans

- In organizations, the widespread support of plans is usually more important than their "correctness"

- Unanimous, conscious and genuine stakeholder agreement with the resulting plans represents the single most critical success factor of architectural planning

- Architectural plans cannot be imposed by architects on their stakeholders, but only produced *collaboratively*

- Plans created by architects without sufficient stakeholder participation are not taken seriously and shelved

- Architects should always seek maximum stakeholder involvement and convergence on the developed plans

Inexplicable Profession of Architects

- Enterprise architects possess a very peculiar combination of competencies, skills and expertise that cannot be summarized into something intelligible

- The profession of enterprise architects is quite unique and has no close analogs among other professions

- There are no metaphors that can capture the essence of their job in its full complexity:
  - Traditional architects — flawed due to organizations' nature
  - City planners — more about the object of their planning
  - Management consultants — about their relations with managers

- To many, the profession of enterprise architects seems shadowy, mysterious and shrouded with secrecy

Two Hats of Enterprise Architects

- The occupation of enterprise architects can be best understood as wearing two different "hats":
  - Technology Experts
  - Change Agents

- Each hat aggregates certain duties, tasks and actions that architects perform as well as knowledge, skills and EA artifacts necessary for accomplishing them

- Both hats must be worn by enterprise architects for the successful fulfillment of their responsibilities as enablers of digital transformation

- Most resources, instruments and activities of architects can be attributed to one of these two hats

Hat of Technology Experts

- The hat of **Technology Experts** implies being very knowledgeable in IT, capable of addressing technical challenges and designing technical solutions

- The resources of Technology Experts are their extensive IT background, knowledge and experience

- The instruments of Technology Experts are IT-focused EA artifacts, e.g. solution designs, landscape diagrams, asset inventories and technology reference models

- The activities of Technology Experts include advising on IT-related issues and designing technical solutions

- Technology Experts closely resemble classic engineers

Hat of Change Agents

- The hat of **Change Agents** implies being very communicable, capable of addressing organizational challenges and helping reach organizational solutions

- The resources of Change Agents comprise such skills as communication and teamwork, and some knowledge

- The instruments of Change Agents are business-focused EA artifacts, e.g. solution overviews, target states, business capability models and architecture strategies

- The activities of Change Agents include communication required to produce agreed organizational solutions

- Change Agents can be compared to politicians

Architects as Ambidextrous Personalities

Technical Side of Architectural Planning

Challenges: Technical challenges caused by the complexity of the external and internal IT environments

Architectural Solution for a Digital Transformation Initiative

Technology Experts — Design → Technical Solution (IT decisions on the structural changes in the landscape) → Organizational Solution (Business decisions on the value of the change initiative)

(The unity of engineering and political components)

Help Reach → Change Agents — Dialog → Business Executives / Business Managers / Business Specialists

Resources: Extensive knowledge of various technology domains and rich practical experience with IT

Skills: Predominantly highly specialized "hard" skills

Instruments: IT-focused EA artifacts useful for capturing technical solutions and storing IT-related information

Activities: Providing advisory services and designing technical solutions for digitalization initiatives

Focus: IT-centric, exclusively on technology issues

Objective: Help organizations make the best possible technical choices and decisions

Meaning: Competent IT professionals capable of finding optimal engineering approaches and solutions

Analogy: Engineers knowledgeable in technicalities

Organizational Side of Architectural Planning

Challenges: Organizational challenges caused by the complexity of the relationship between business and IT

Resources: Strong communication and teamwork abilities, as well as some subject area knowledge

Skills: Mostly generic and universal "soft" skills

Instruments: Business-focused EA artifacts useful for capturing organizational solutions and enabling their discussion

Activities: Interacting with stakeholders and facilitating the development of organizational solutions

Focus: People-centric, mainly on stakeholder interests

Objective: Help organizations progress with their transformation efforts

Meaning: Proficient communicators capable of finding politically acceptable planning decisions

Analogy: Politicians promoting reforms among the people
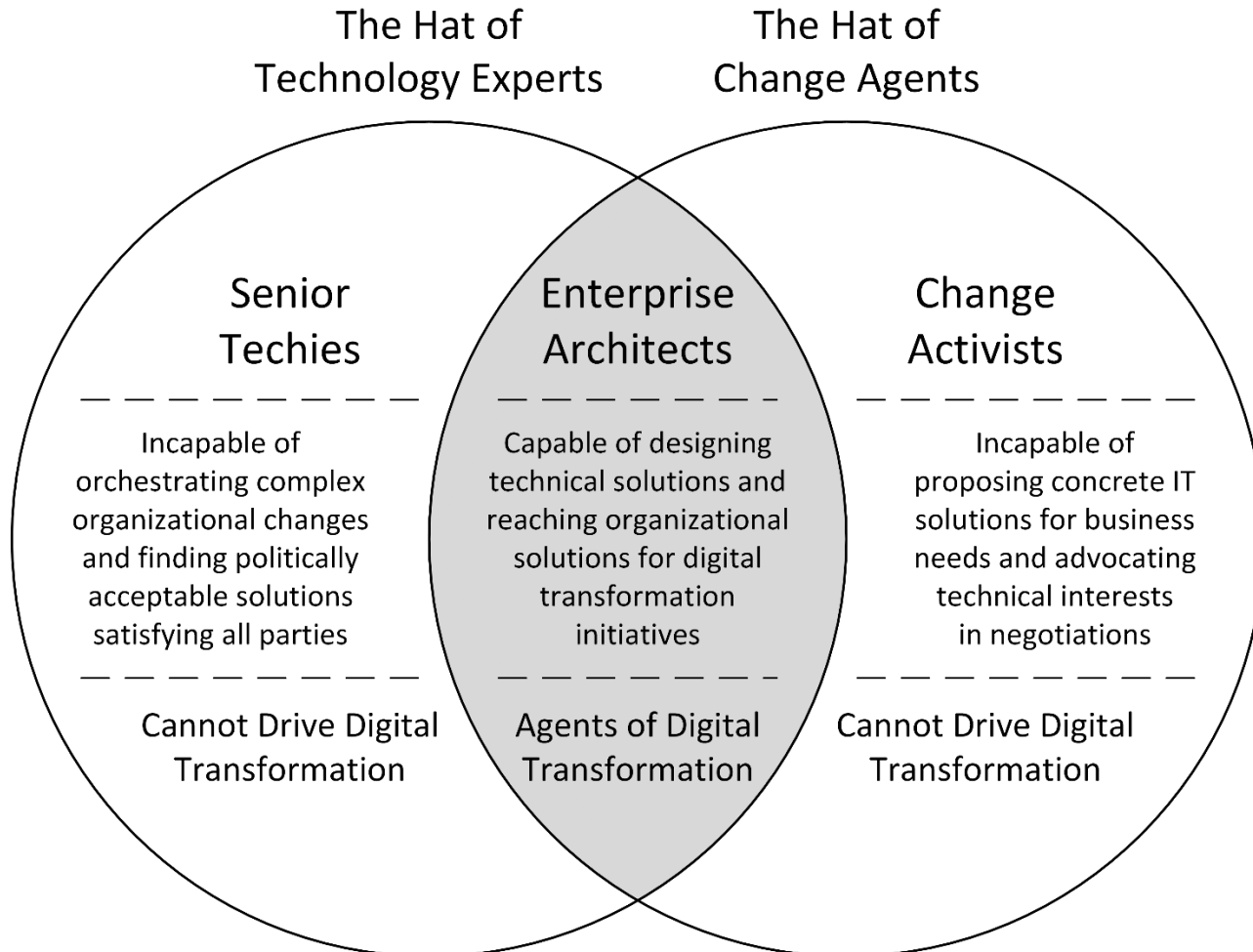
Double Identity of Enterprise Architects

- Enterprise architects represent the unity of Technology Experts and Change Agents capable of developing both solution components and composing integral solutions

- Enterprise architects possess two consistent identities of Technology Experts and Change Agents simultaneously

- Putting on any one of the two hats is not enough:

  - Senior techies (only Technology Experts) can neither orchestrate complex organizational changes, nor settle the conflicts of interests between different parties

  - Change activists (only Change Agents) do not understand technology to propose concrete IT solutions and protect technical interests during negotiations

Senior Techies and Change Activists

The Hat of
Technology Experts

The Hat of
Change Agents

**Senior
Techies**

— — — — — — — — —

Incapable of
orchestrating complex
organizational changes
and finding politically
acceptable solutions
satisfying all parties

— — — — — — — — —

Cannot Drive Digital
Transformation

**Enterprise
Architects**

— — — — — — — —

Capable of designing
technical solutions and
reaching organizational
solutions for digital
transformation
initiatives

— — — — — — — —

Agents of Digital
Transformation

**Change
Activists**

— — — — — — — — —

Incapable of
proposing concrete IT
solutions for business
needs and advocating
technical interests
in negotiations

— — — — — — — — —

Cannot Drive Digital
Transformation

Lecture Summary

- Enterprise architects are specialized professionals responsible for leading architectural planning

- Enterprise architects are practitioners of the EA discipline, use various EA artifacts and operate in the institutional context of an EA practice

- Architects have no decision-making authority and can only influence decisions by consulting real managers

- The work of enterprise architects in organizations spans from the ideation to completion of change initiatives

- Enterprise architects wear the hat of Technology Experts as well as the hat of Change Agents

In the Next Lecture

- The next lecture will present enterprise architects in the broader organizational, managerial and environmental context

QUESTIONS?

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Full Teaching Pack Available on Request

The full teaching pack based on the books ***The Practice of Enterprise Architecture: A Modern Approach to Business and IT Alignment*** and ***Enterprise Architects: The Agents of Digital Transformation*** is available on request to the author (kotusev@kotusev.com)