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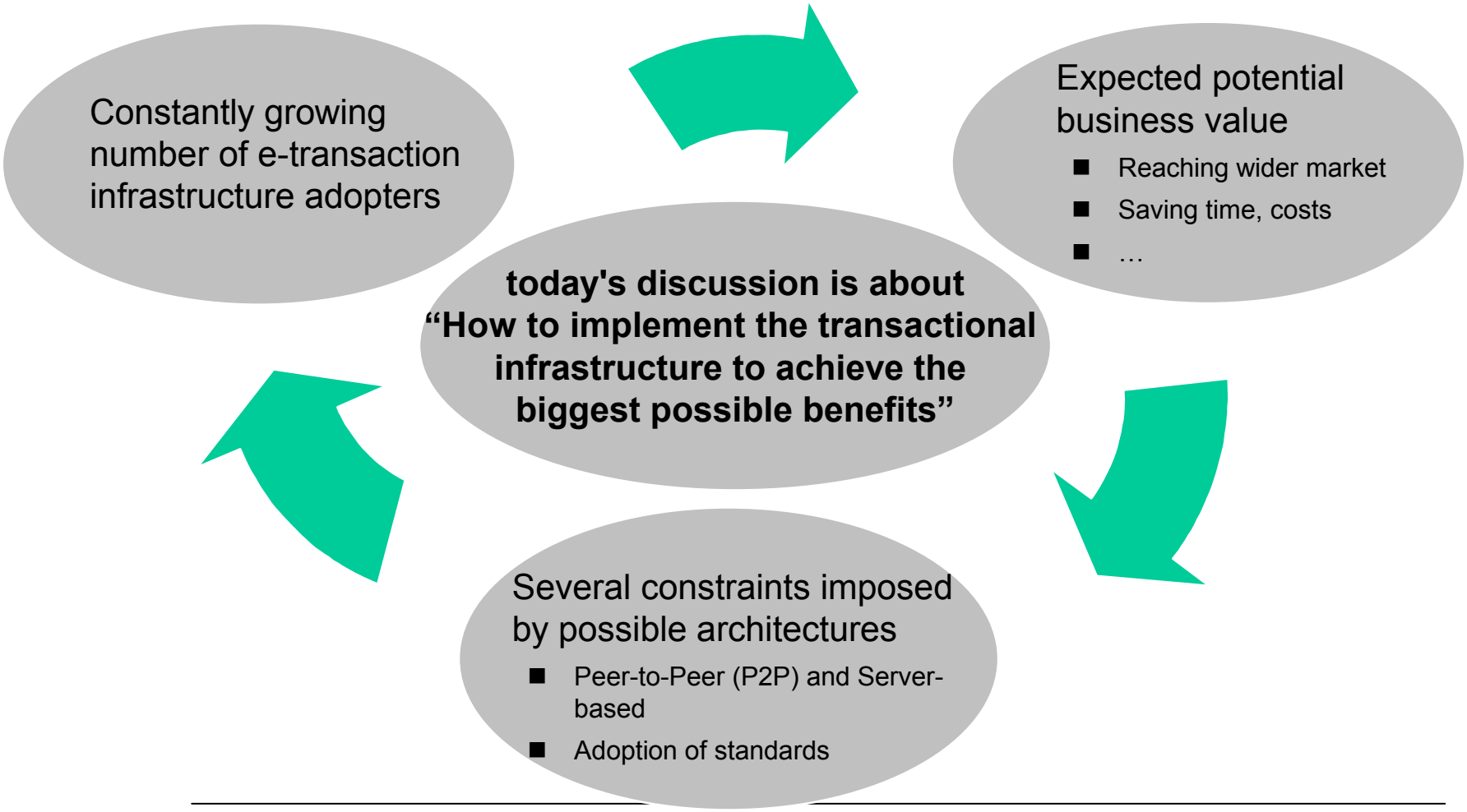
"A Hybrid Architecture for Enabling Electronic Transactions Among Enterprises and Governmental Bodies"

Workshop on "Enterprise Software Application Interoperability for Businesses and Governments"

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Introduction



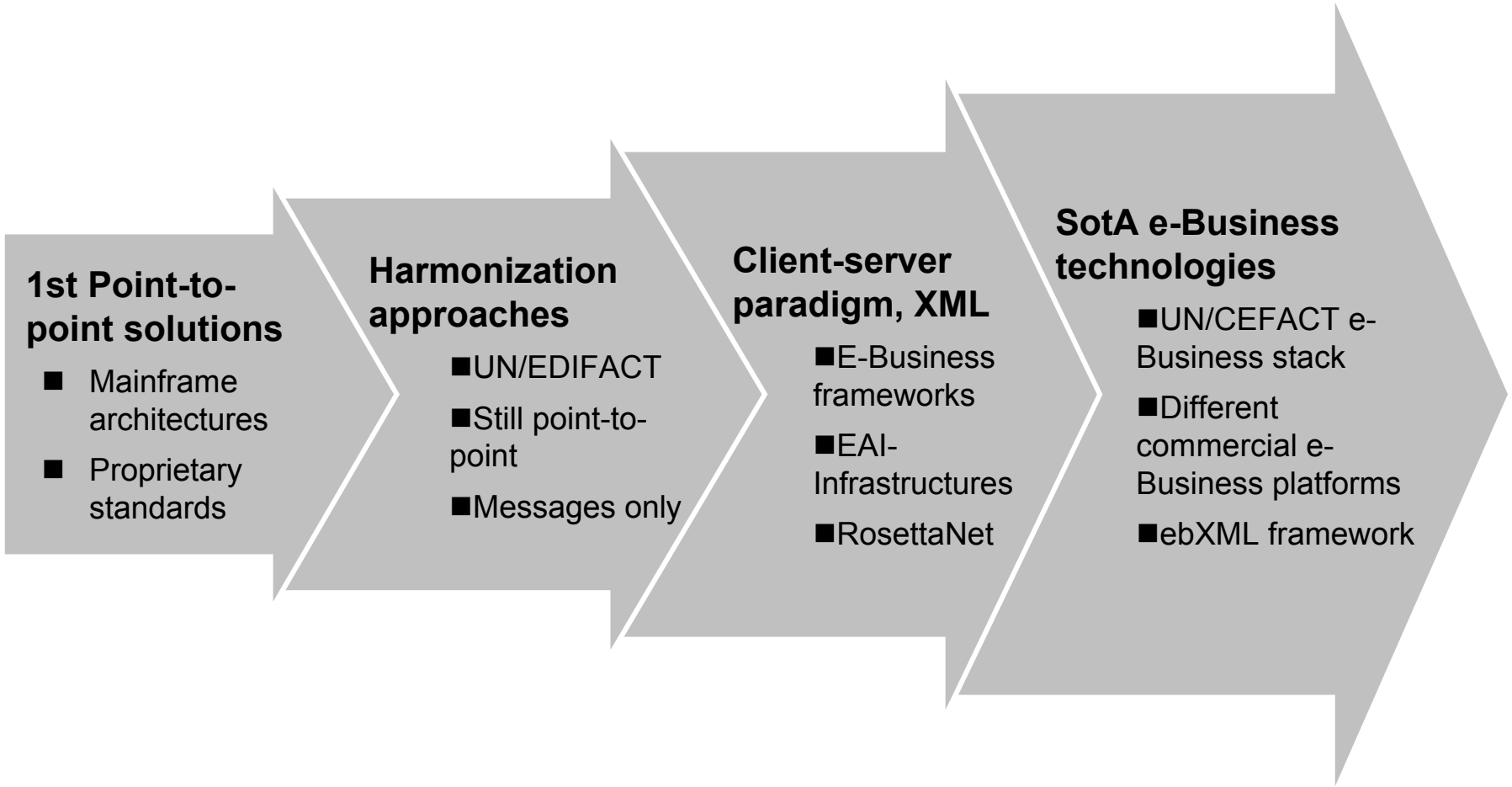
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Agenda

- Brief state of the art review
- Evaluation of P2P and Server-based architectures
- A hybrid of P2P and Server-based architecture
- Implementation roadmap towards a real life platform

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State of the art review



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Evaluation of pure P2P and server-based approaches

Pure server-based

advantages

- Single point of complexity
- Central set-up and control of bus. Relationship
- maturity

disadvantages

- Possible high workload
- Single point of failure
- Limited scalability

Pure P2P

advantages

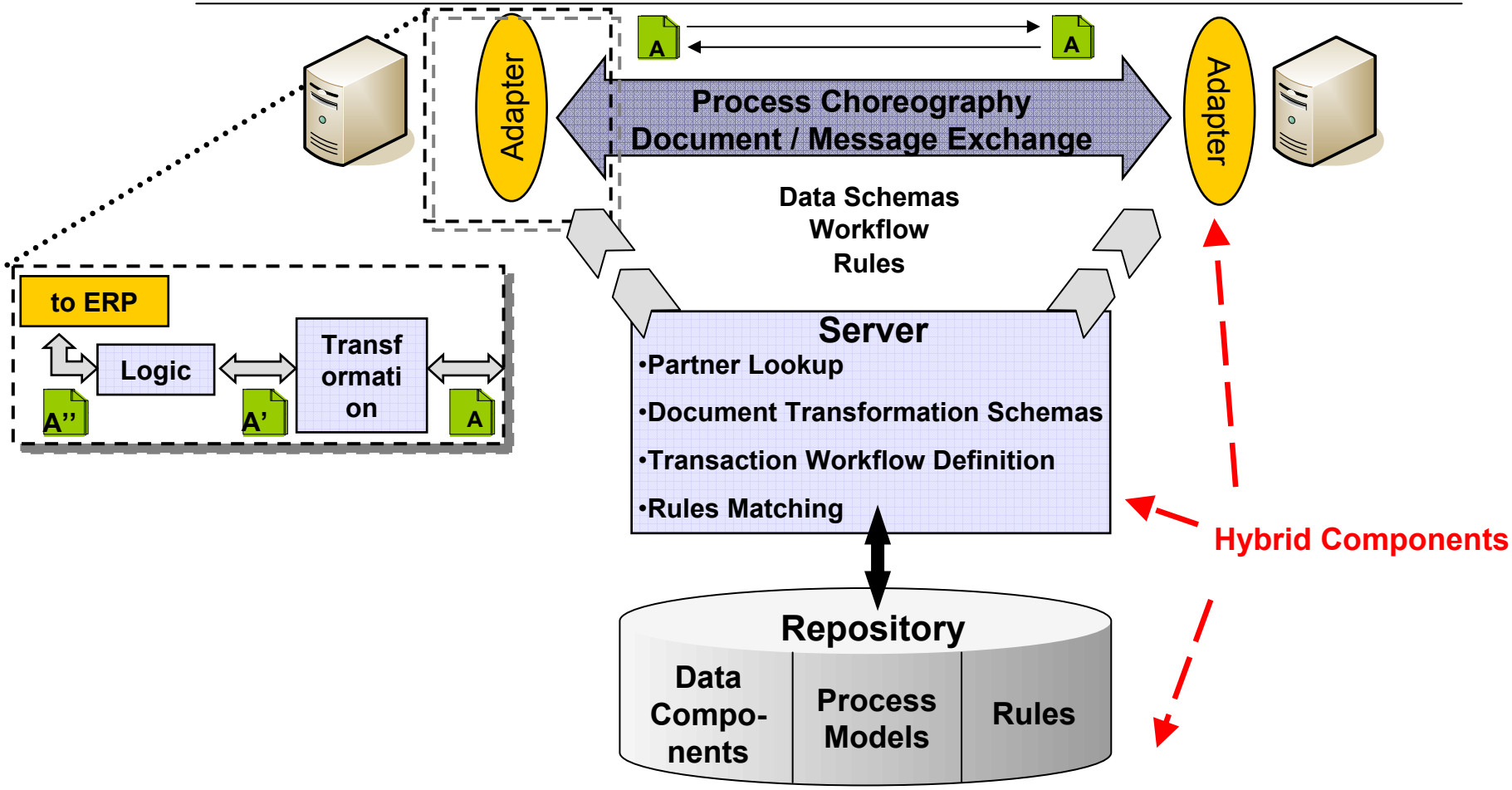
- synchronous msg. exchange
- Autonomously negotiation/ establishment of business relations
- Democratic user participation, censorship resistance

disadvantages

- Sophisticated technology
- Distributed complexity
- immaturity

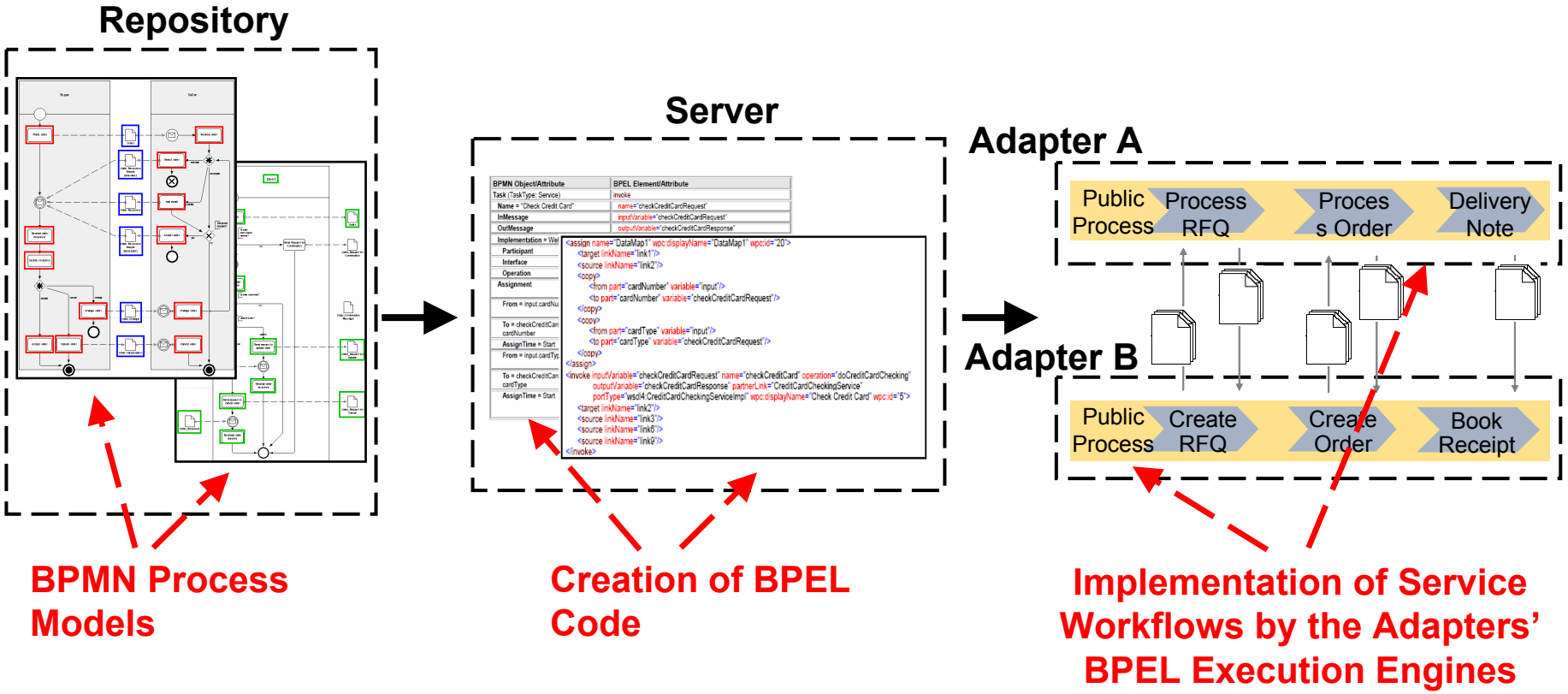
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A hybrid architecture for e-Transactions



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Information flow among the architectural components



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Functionalities of main architectural components

Implementation roadmap	Repository	Server	Adapter
Stage 1	•static process models •generic document models	•provides BPEL code •based on static models	•implements BPEL engine •incorporates business and transformation logic
Stage 2	•static process models •generic document models •business information entities	•provides BPEL code based on static models •provides mapping for business documents	•implements BPEL engine •implements business logic •Implements transformation engine
Stage 3	•business and legal rules •dynamically customized models for each partner •business information entities	•provides customized BPEL code •provides mapping for business documents	•implements BPEL engine •implements transformation engine

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Conclusion and summary

- Incorporation of both P2P and server-based approaches:
  - Effective support of e-transactions
  - To be easily implemented by SME
- GENESIS project test-bed
  - Implementation and real-life application
  - Following the proposed implementation roadmap

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Thanks for your attention!

Questions?

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