

# Deploying Simulation Models in A Large Scale Service Delivery Environment



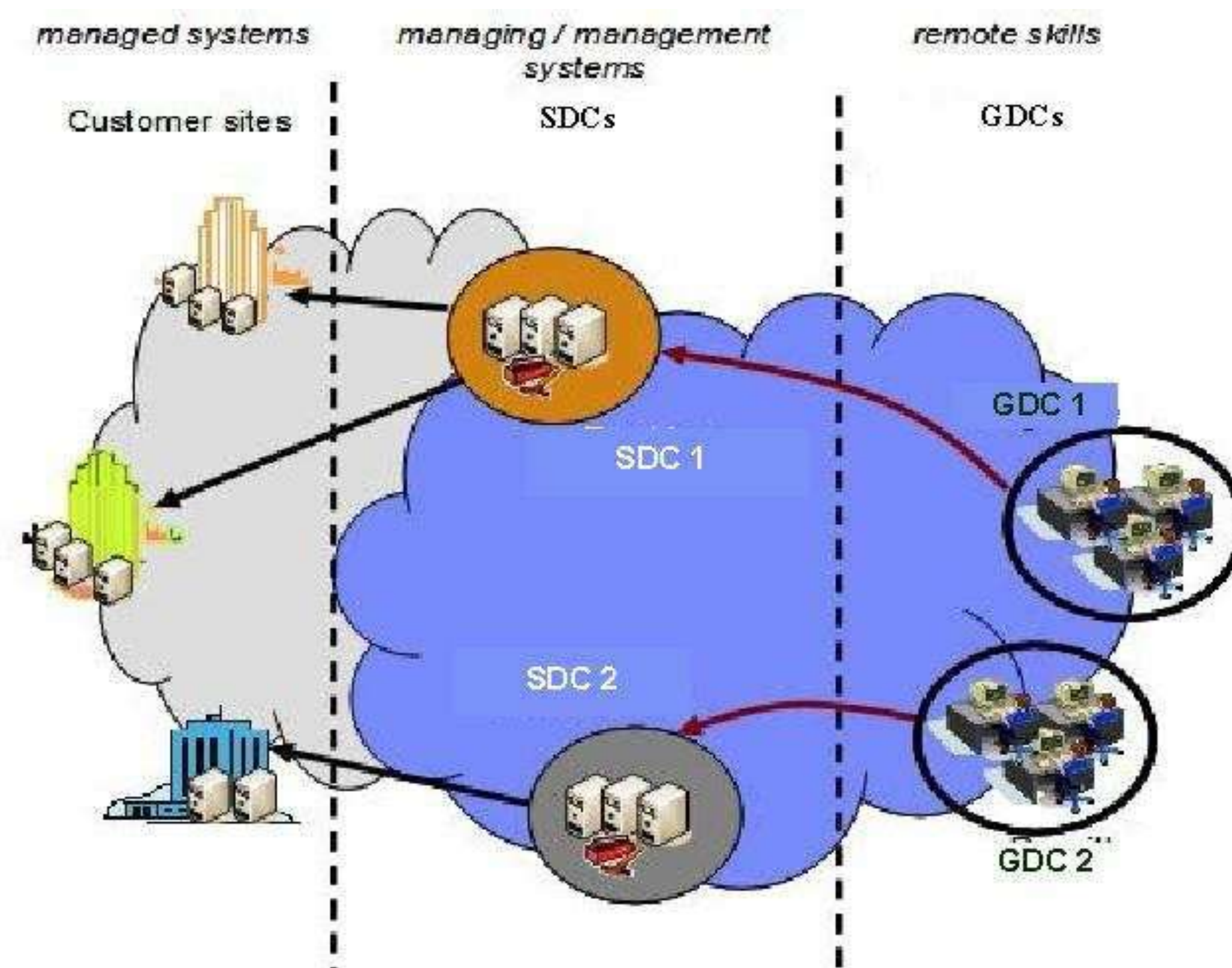
Yixin Diao<sup>1</sup>, David Northcutt<sup>2</sup>, and Rodney Wallace<sup>2</sup>

<sup>1</sup>IBM T.J. Watson Research Center, P.O. Box 704, Yorktown Heights, NY 10598, USA

<sup>2</sup>IBM Global Technology Services, 294 Route 100, Somers, NY 10589, USA

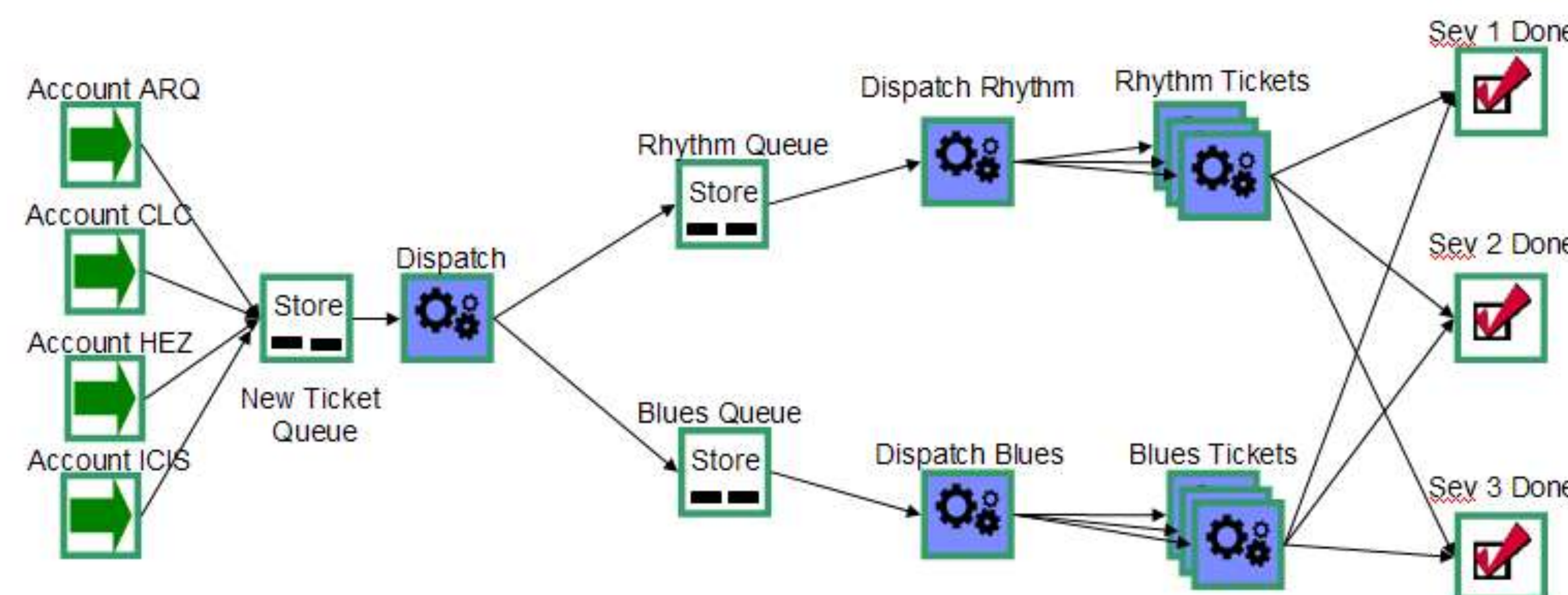
## IT Global Service Delivery

- Managed Systems
  - Servers, networks, application, business processes that services delivery provider manages on behalf of clients
- Managing Systems / Service Delivery Centers
  - Tools, systems, processes used to deliver services to clients
  - Receive work requests from clients; interact with clients regarding delivery
- Remote Sites / Delivery Centers
  - Process customer requests



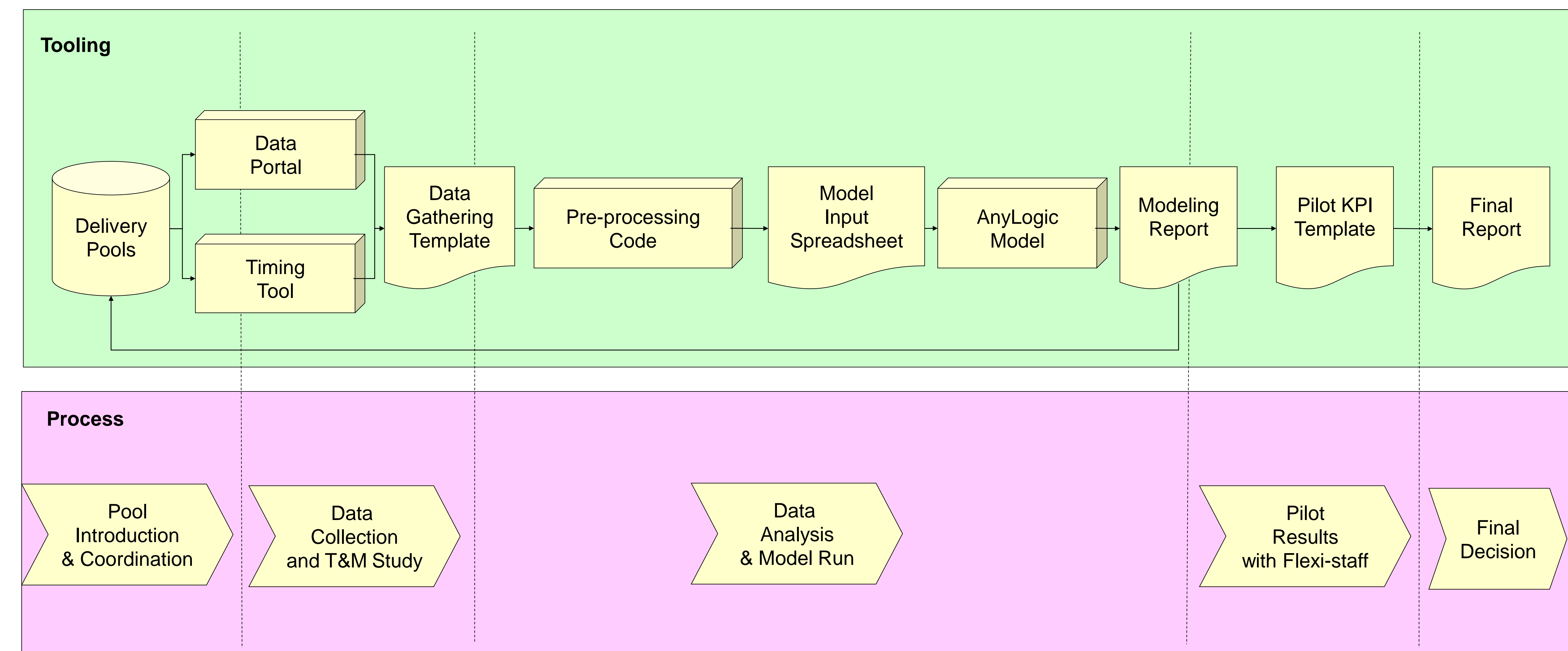
## Service Delivery Simulation Model

- Build models to emulate essential aspects of each pool type
- Customize the model to the individual pool's characteristics such as workload, service levels, coverage requirements, etc.
- Ensure staffing levels are correct for the workloads and service levels present in each of our pools



## Large Scale Model Deployment

- Standard modeling and deployment processes and tooling



- Design considerations for model providers
  - Collect and analyze service operation data in a less labor intensive way
  - Easy to use not only for experienced model analysts but for less-skilled geo-based teams
- Design considerations for model consumers
  - Experience minimum impact to daily service life
  - Understand the modeling results as well as the underlying assumptions and decision making processes
  - Objectively evaluate the model recommendation prior to final implementation

## Deployment Scale and Business Value

- Deployment Scale

	# Service Line Components	# Global Delivery Centers	# Service Delivery Teams	# Headcounts
Pilot	1	1	10	300+
Phase 1	4	13	100+	4,000+
Phase 2	5	18	150+	4,000+
Phase 3	7	20	150+	5,000+

- Business Value

- Minimize waste by accurately determining staffing requirements
- Maximize quality by quantitatively verifying and predicting ability to achieve SLAs
- Improve efficiency and ensure quality by validating future state designs prior to implementation