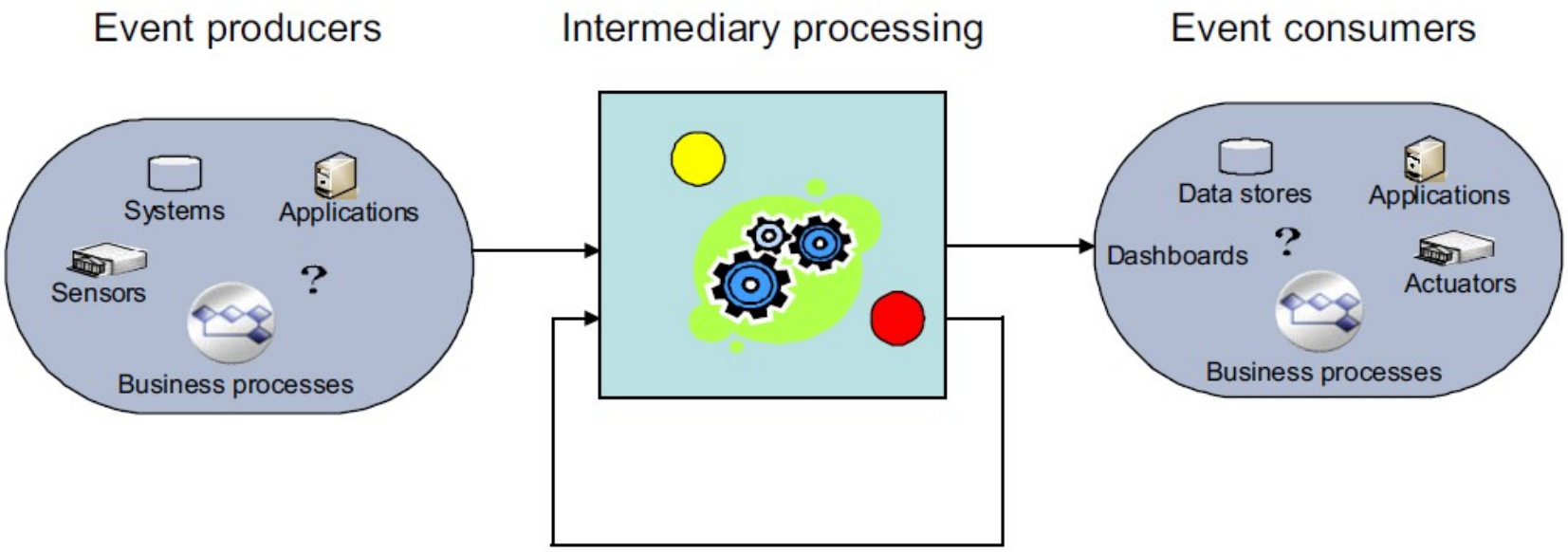
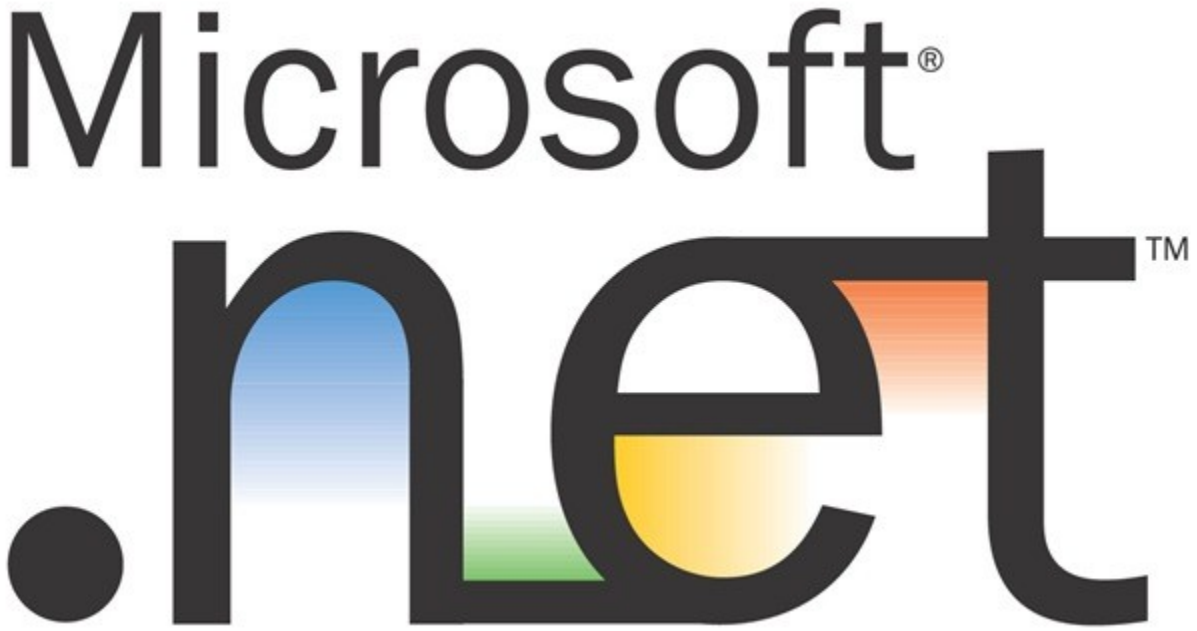
Implementing event processing

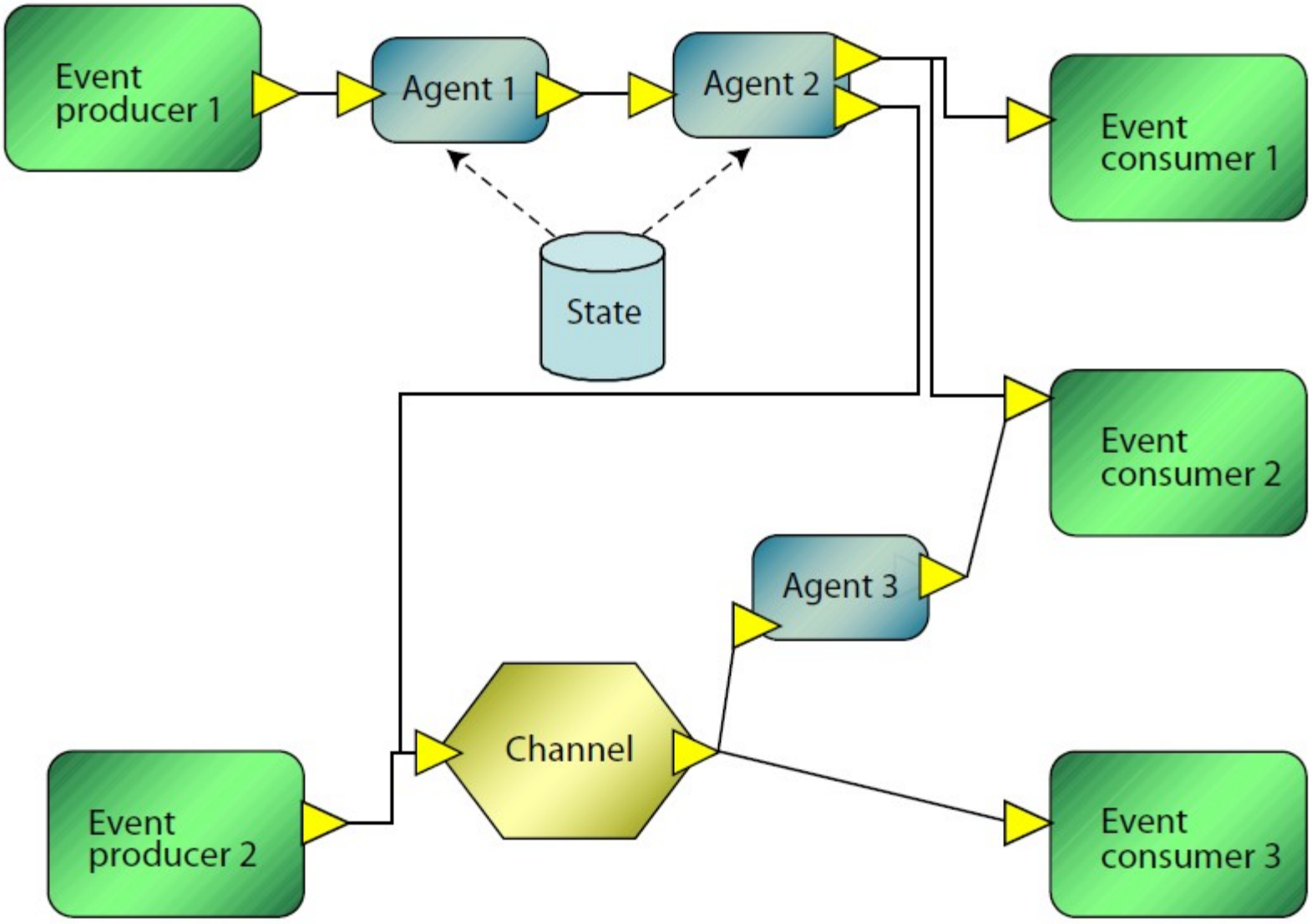
PV226 LaSArIS

Event Drive Architecture

Event-Based Programming


Event producers
Intermediary processing
Event consumers
Systems
Applications
Sensors
?
Business processes
Data stores
Applications
Dashboards
?
Actuators
Business processes


Microsoft®
.net™


Event producer 1
Agent 1
Agent 2
Event consumer 1
State
Event consumer 2
Agent 3
Channel
Event producer 2
Event consumer 3

THE POWER OF EVENTS

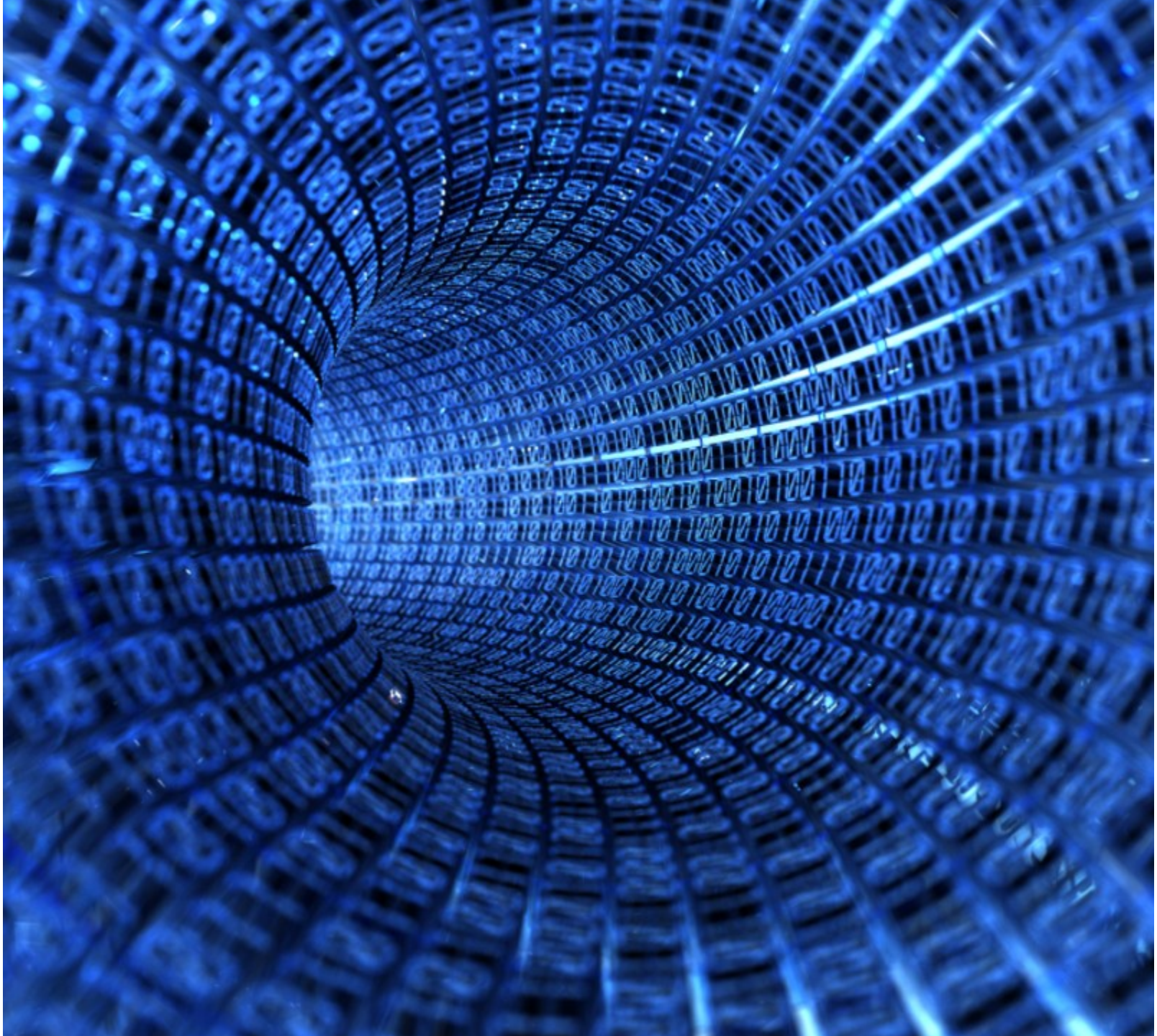
AN INTRODUCTION TO COMPLEX EVENT PROCESSING IN DISTRIBUTED ENTERPRISE SYSTEMS

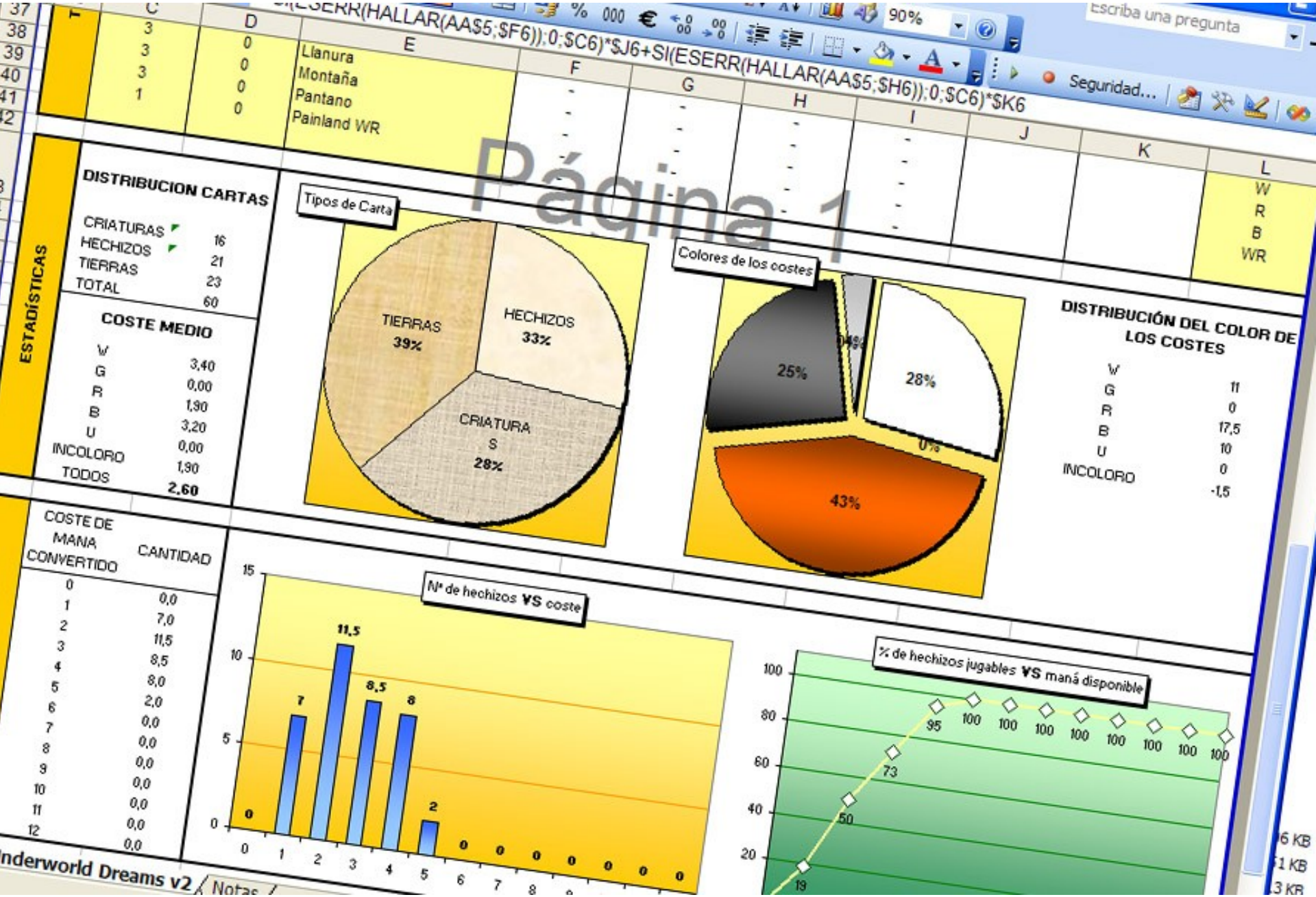
DAVID LUCKHAM

Reactive Programming

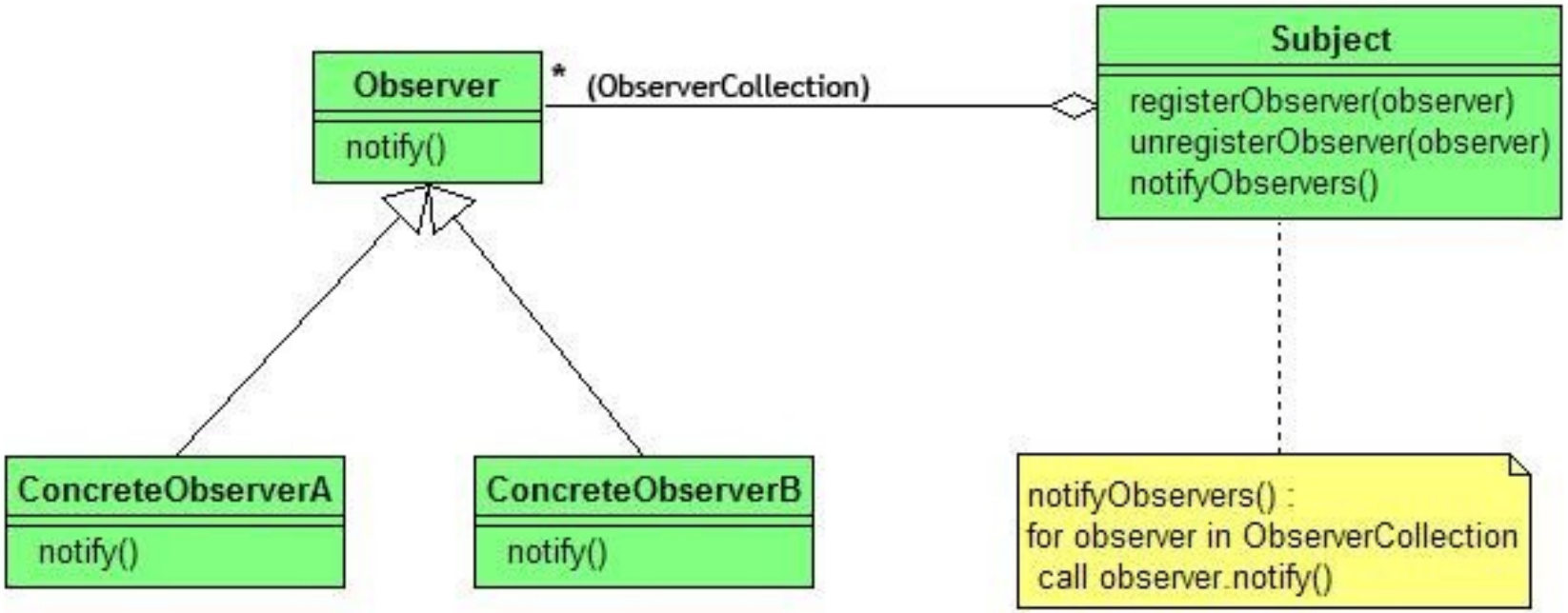
```
int a = 10;
int b = a + 1;
a = 20;
b = ?
```

Declarative




Página 1
ESTADÍSTICAS
DISTRIBUCION CARTAS
CRIATURAS 16
HECHIZOS 21
TIERRAS 23
TOTAL 60
COSTE MEDIO
W 3,40
G 0,00
R 1,90
B 3,20
U 0,00
INCOLORO 1,90
TODOS 2,60
Tipos de Carta
TIERRAS 39%
HECHIZOS 33%
CRIATURAS 28%
Colores de los costes
25%
28%
43%
DISTRIBUCIÓN DEL COLOR DE LOS COSTES
W 11
G 0
R 17,5
B 10
U 0
INCOLORO -1,5
COSTE DE MANA CONVERTIDO
CANTIDAD
Nº de hechizos VS coste
% de hechizos jugables VS maná disponible
Underworld Dreams v2
Notas

OBSERVER


Observer
notify()
*
(ObserverCollection)
Subject
registerObserver(observer)
unregisterObserver(observer)
notifyObservers()
ConcreteObserverA
notify()
ConcreteObserverB
notify()
notifyObservers() :
for observer in ObserverCollection
call observer.notify()

ASTM A888
CHINA
ASTM

LINQ

Language INtegrated Query

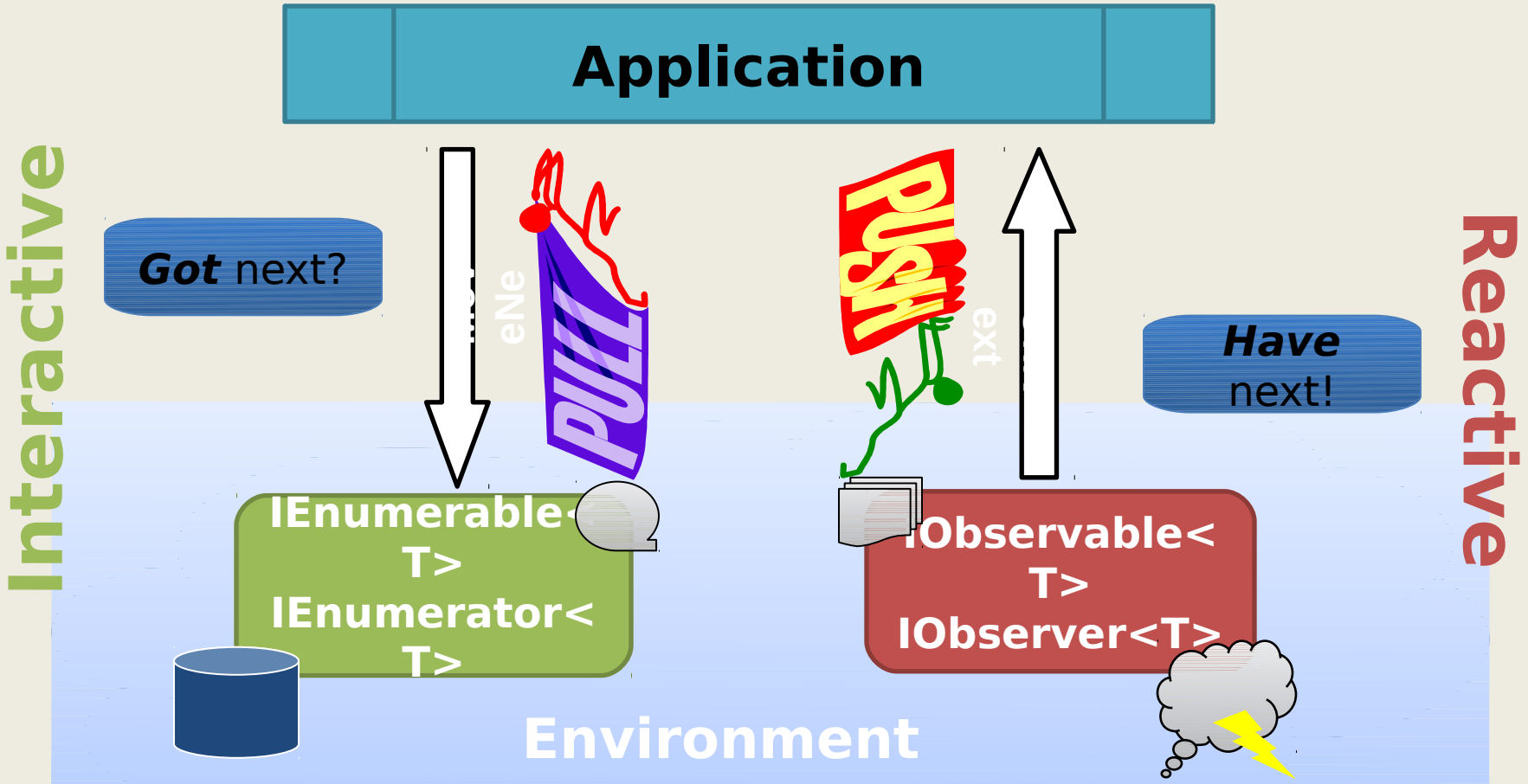
Reactive Extensions

Too hard today...

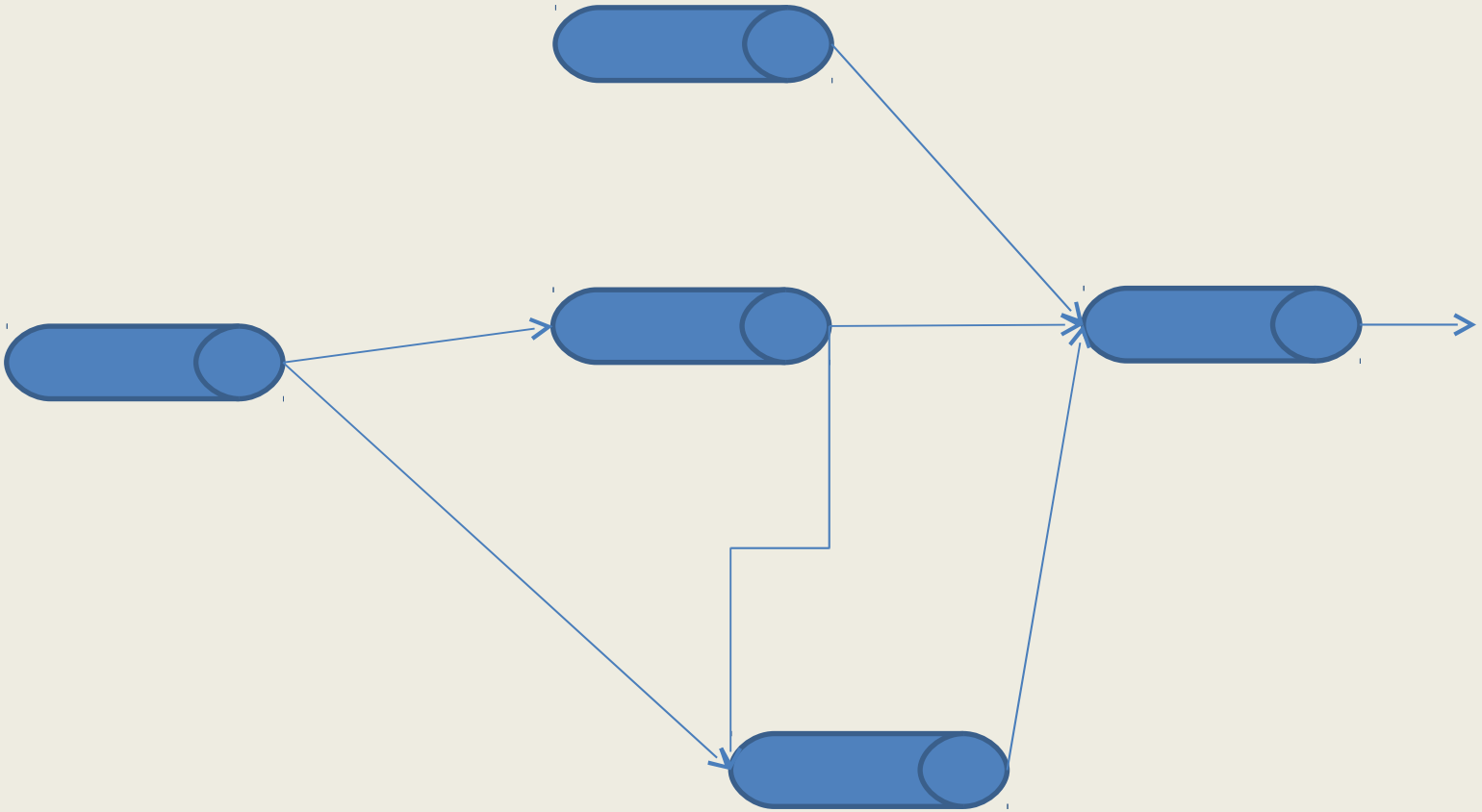
Rx is a library for composing asynchronous and event-based programs using observable collections

Queries? LINQ?

Push versus Pull



Composing

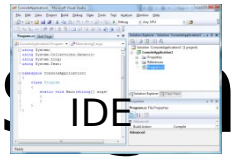


Rx = Observables + LINQ + Schedulers

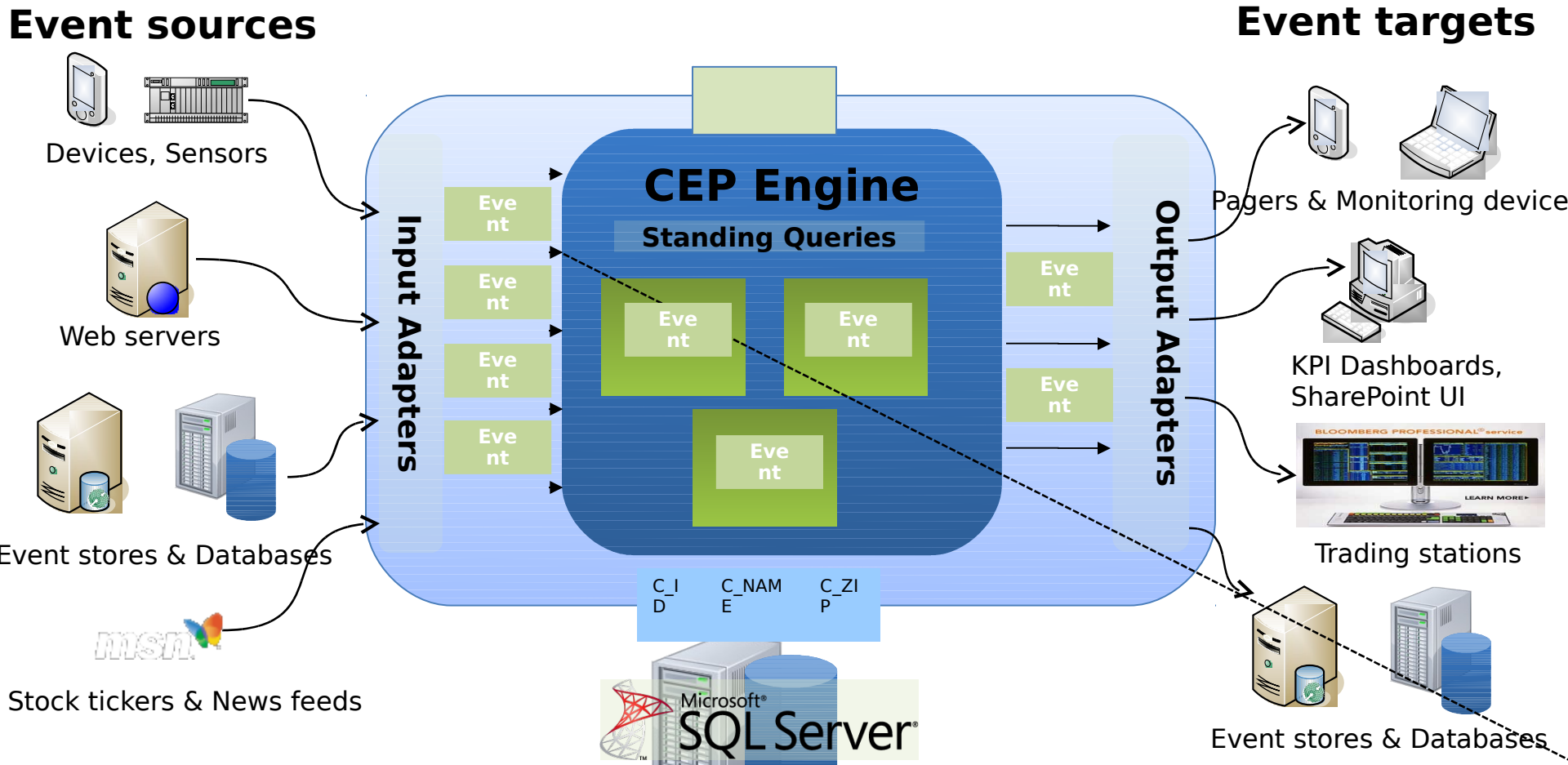
StreamInsight

Overview: Microsoft S[illegible]

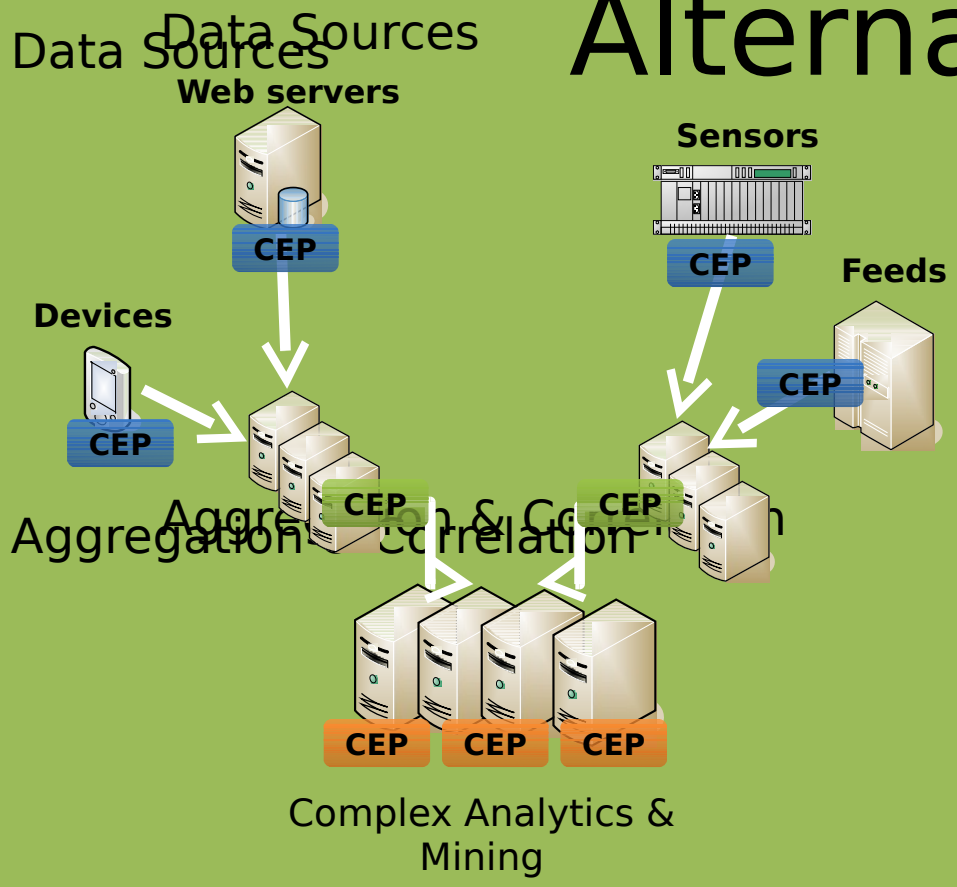
Visual Studio 2008



.NET
C#
LINQ



CEP Deployment Alternatives



CEP for lightweight processing and filtering

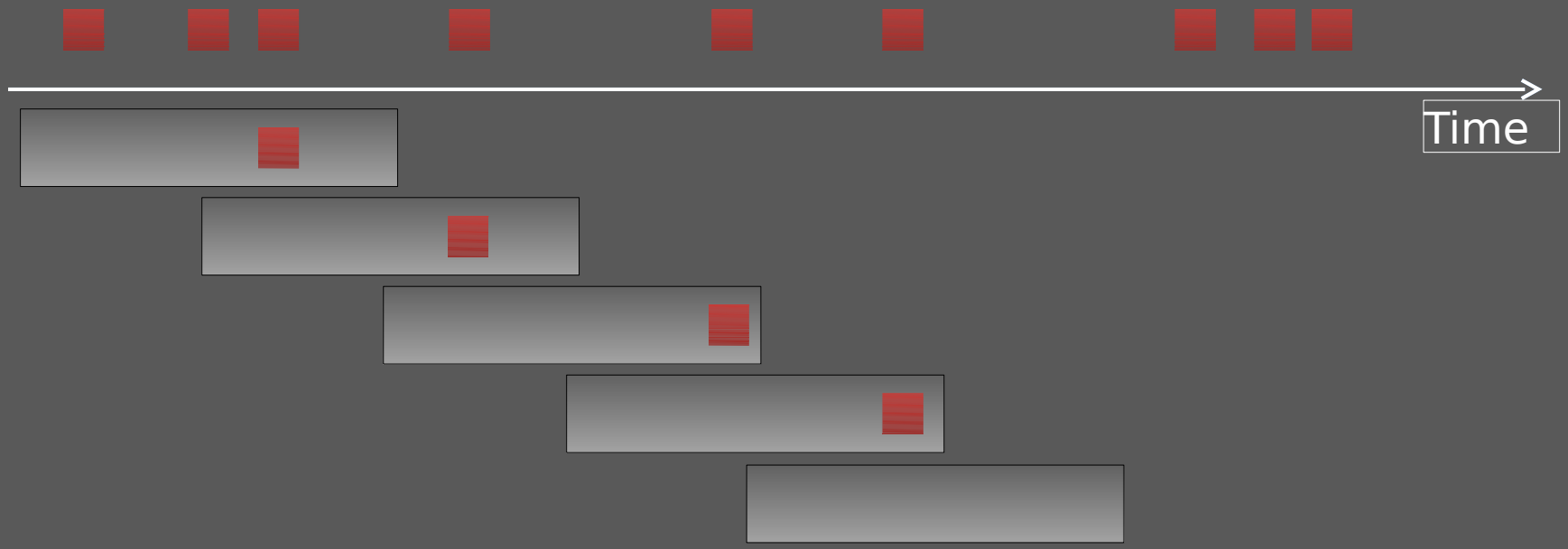
CEP for aggregation and correlation of in-flight events

CEP for complex analytics including historical data

@ZAMANI

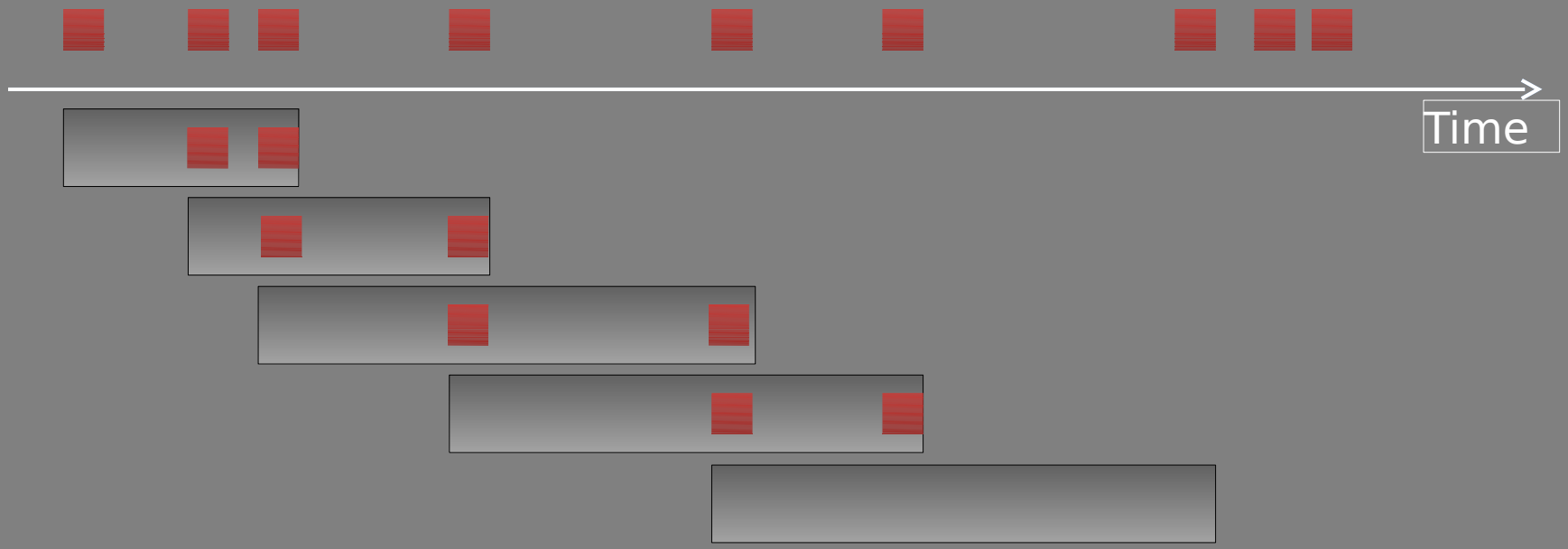
Windows

Hopping Window



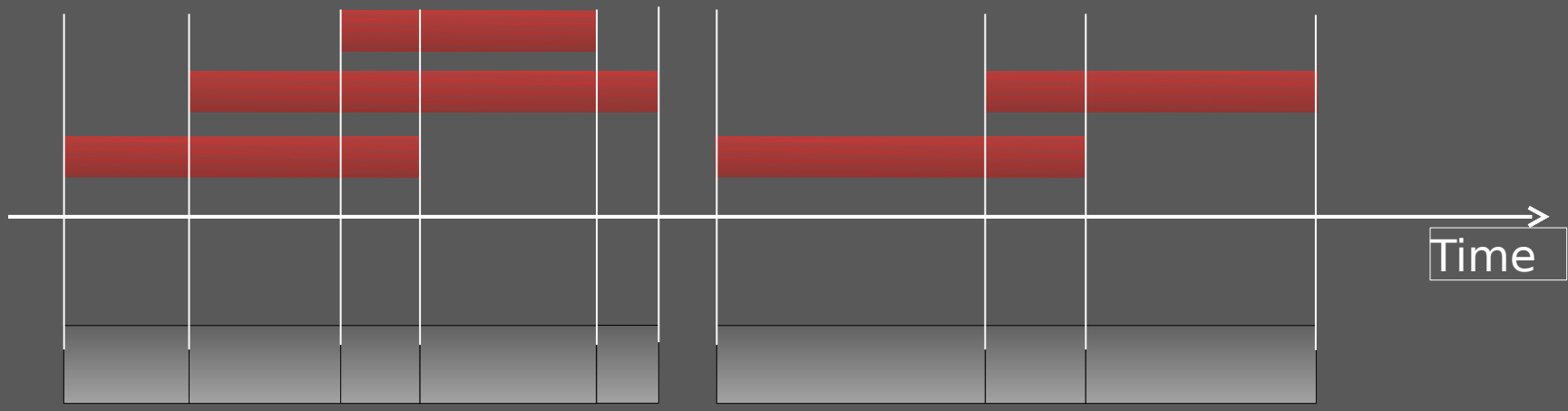
Windows

Count Window (N=3)



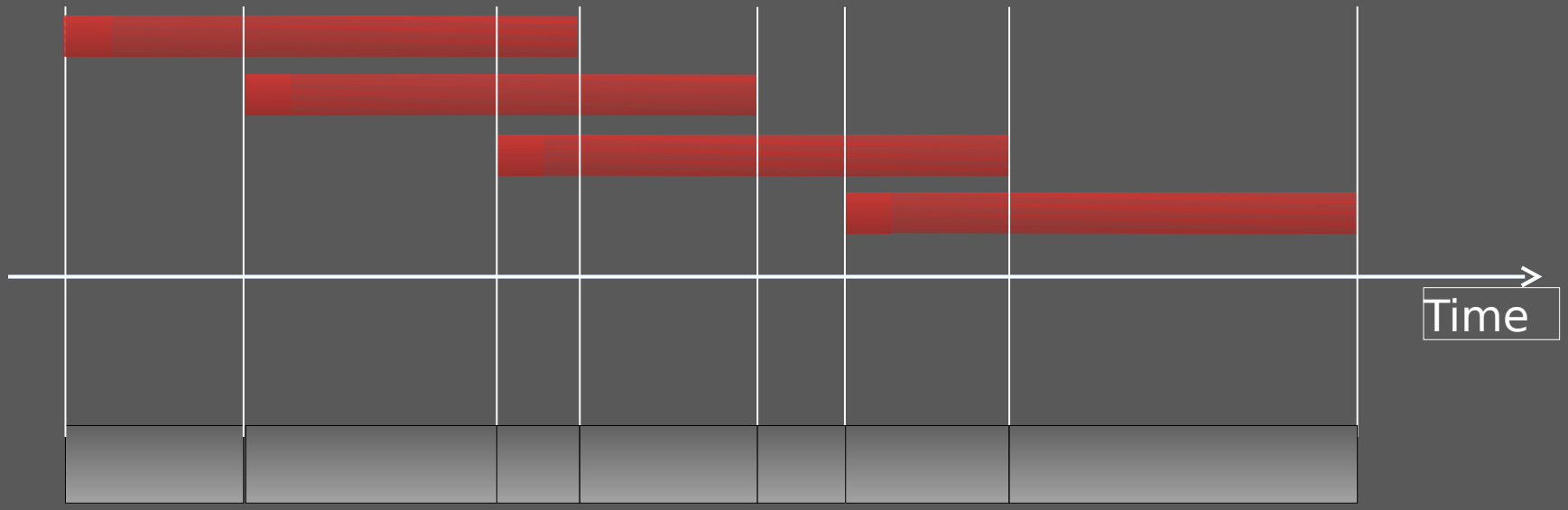
Windows

Snapshot Window



Windows

Snapshot Window



Summary

Implementing Event Processing Agent

Use Observer Pattern

Do It Declaratively

Rx Framework is good tool

StreamInsight for temporal queries

THANK
YOU
GRACIAS
BOLZİN
MERCI
BİYAN
ARIGATO
SHUKURIA
MEHRBANI
GRAZIE
SUKSAMA
TASHAKKUR ATU
YAQHANYELAY
DANKSCHEEN
SHUKRIA
TINGKI
JUSPAXAR
GOZAIMASHITA
EFCHARISTO
KOMAPSUMNIDA
MAAKE
PALDIES
EKHMET
SPASIBO
DENKAUJA
NENACHALHYA
SIKOMO
MINMONCHAR
MAKETAI
SPASSIBO
SNACHALHUYA
NUHUN
CHALTU
WABEEJA
MAITEKA
HUI
YUSPAGARÀTAM
DHANYABAAD
ANIHA
ATTO
MERSI
UNALCHÉESSH
GUI
HATUR
EKOJU
SANCO
MERASTAWHY
GAEJTHO
LAH
TAVTAPUCH
MEDAWAGSE
AGUYJE
FAKAAUE
BAIKA