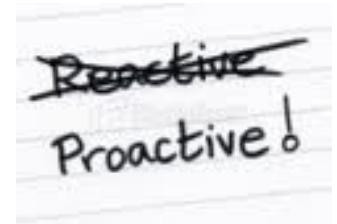


Proactive and Adaptive Event-Driven Monitoring

IBM – Haifa Research Lab



Proactive Event-Driven Computing

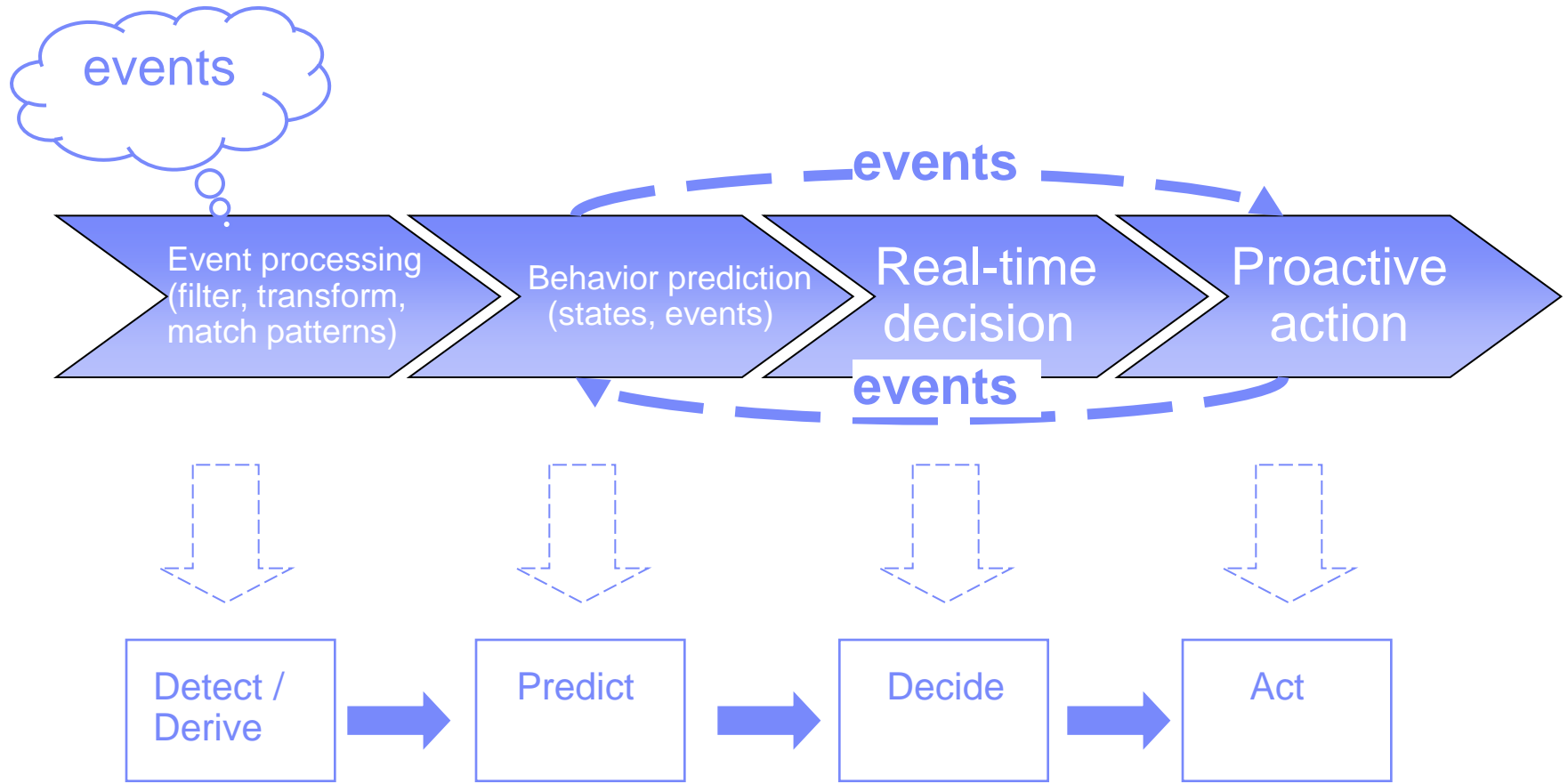


Proactive event-driven computing is a new paradigm aiming at predicting the occurrence of problems/threats (or opportunities) before they occur, and changing the course of actions to mitigate them (or leverage them)

“Event processing can be used to detect an instance of a predictable situation that requires attention, to identify exceptional threats before they cause problems and to alert users to opportunities that require intervention”.

Gartner #171262, October 2009

What? (another view)



Use Case 1: Personal reschedule



Detect

I got out of the house 20 Minutes late; there are three spots of traffic congestion on the way to the office; it is raining; and I have an important meeting in 25 minutes!



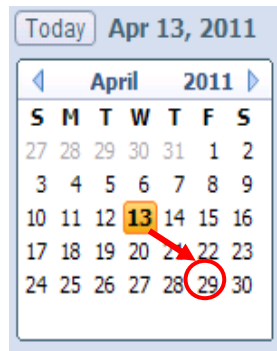
Predict

I am not going to get to the meeting, not even close!



Decide

Check whether there is a qualified person for this meeting that can replace me and has lower priority task for the duration of this meeting and reschedule his/her other obligations;
Alternatively, check if there is another time-slot later on the day for which the meeting can be rescheduled and get a decision!



Act

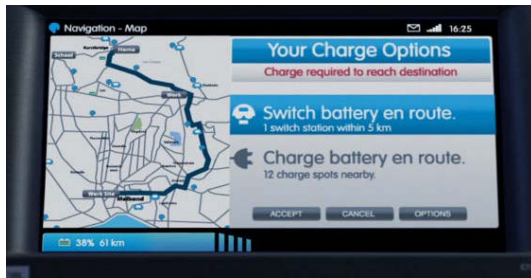
Notify all involved on their reschedule.

Use Case 2: Electric car – battery replacement overload



Background:

A company leases electric cars that can drive up to 100 miles; it provides both personal and public battery charge spots, and robotic battery replacement service stations as part of the lease.



Detect

Tracking the cars driving within a certain area and their battery status.

Predict

In 2 hours the service stations in the area will be out of charged batteries.



Decide

Whether there are available spare batteries nearby that can be shipped via car, or a helicopter need to be dispatched to ship batteries from the central store.



Act

Load batteries on selected means of transportation and start the journey!

Use Case 3: Portfolio tuning

Symbol	Company Name	Price	Change	% Change
3182.KL	GENTING BHD	3.90	0.02	(0.51%)
1961.KL	ICI CORPORATION B	3.18	0.04	(1.27%)
7206.KL	RAMUNIA HOLDINGS	0.37	0.05	(11.90%)
2498.TW	HIGH TECH COMPUTE	300.00	10.00	(3.23%)

Detect

Track corporate actions, news, exchange prices, and rumors about all securities in my portfolio

Predict

My portfolio is going to exceed my personal risk limit within 1 hour

Decide

Mark the securities to be sold and best timing to sell, find an alternative to buy that retain the risk limit.

Act

Buy/Sell orders

