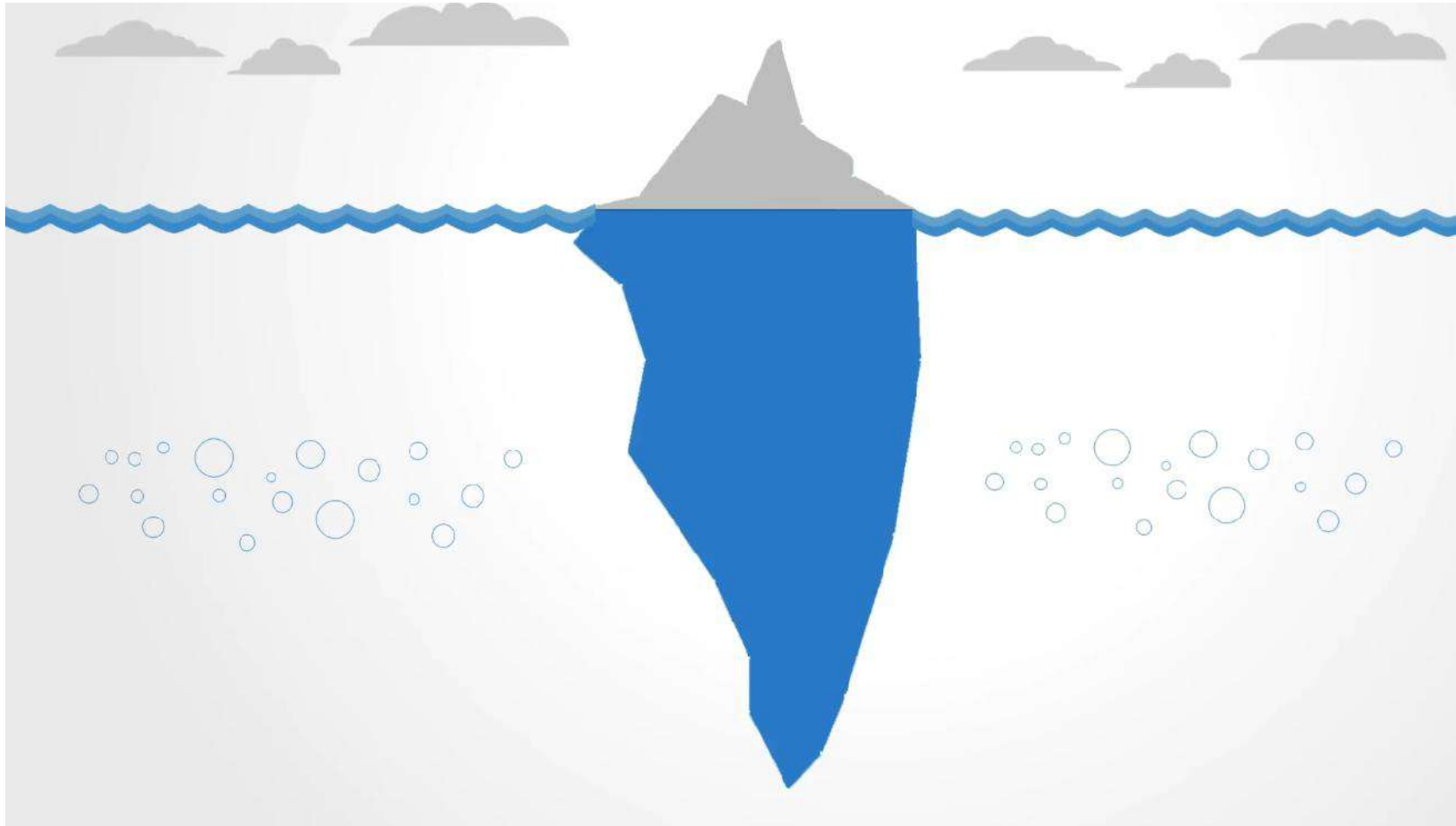


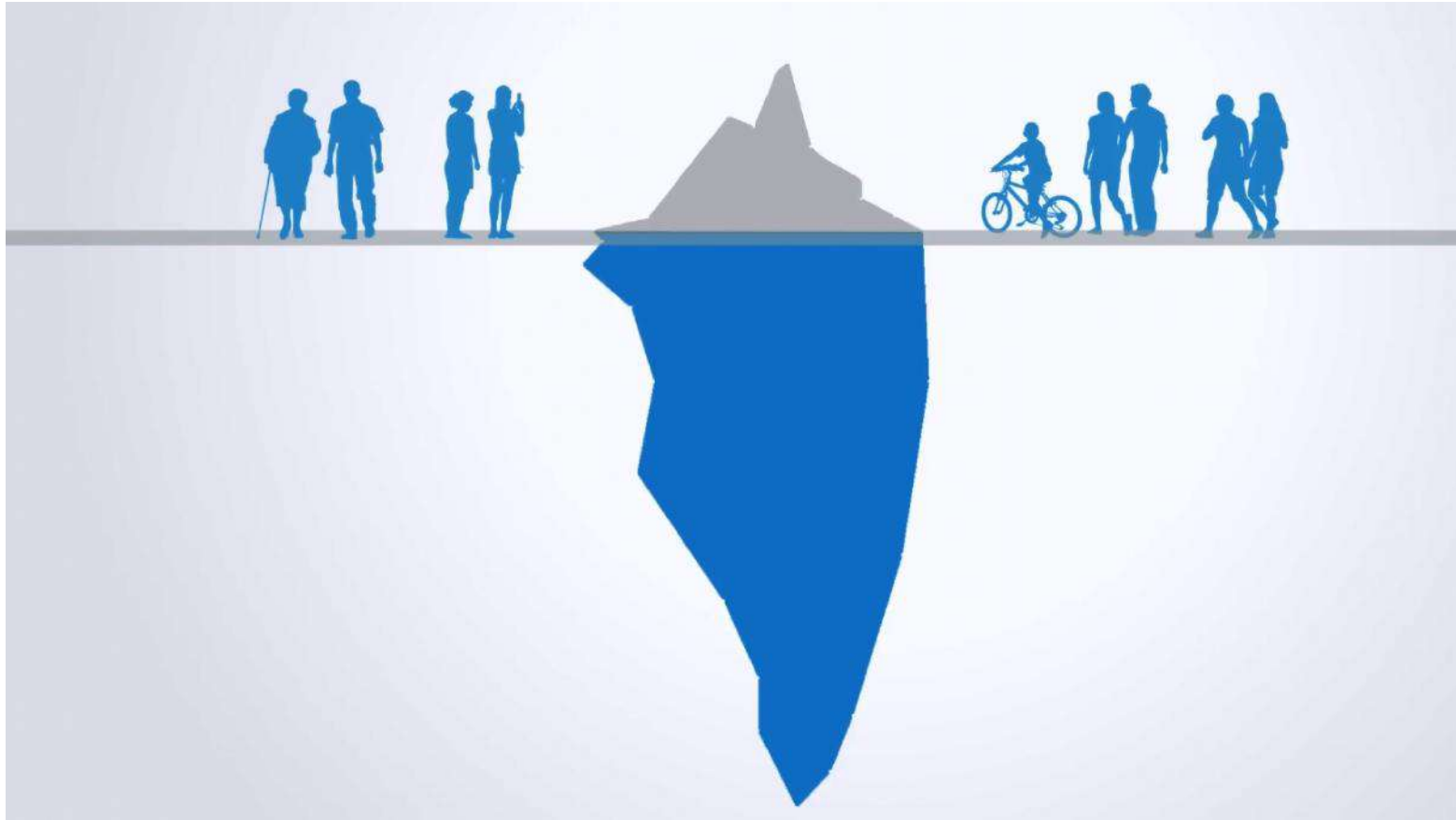
## Applying the ice-berg model in the Education System



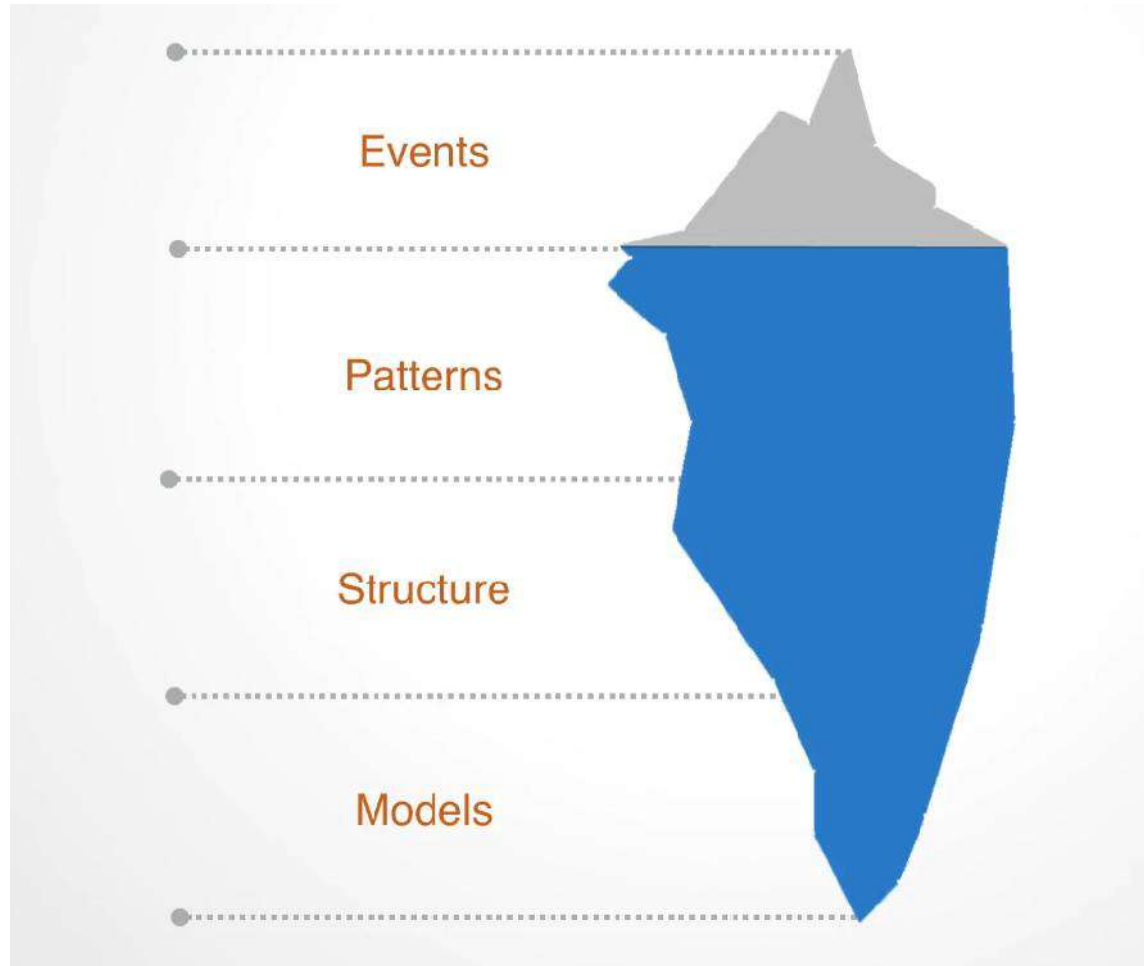
## Iceberg model basics



## Tip of the ice-berg – only 10% is visible



## 90% of the iceberg lies below the tip



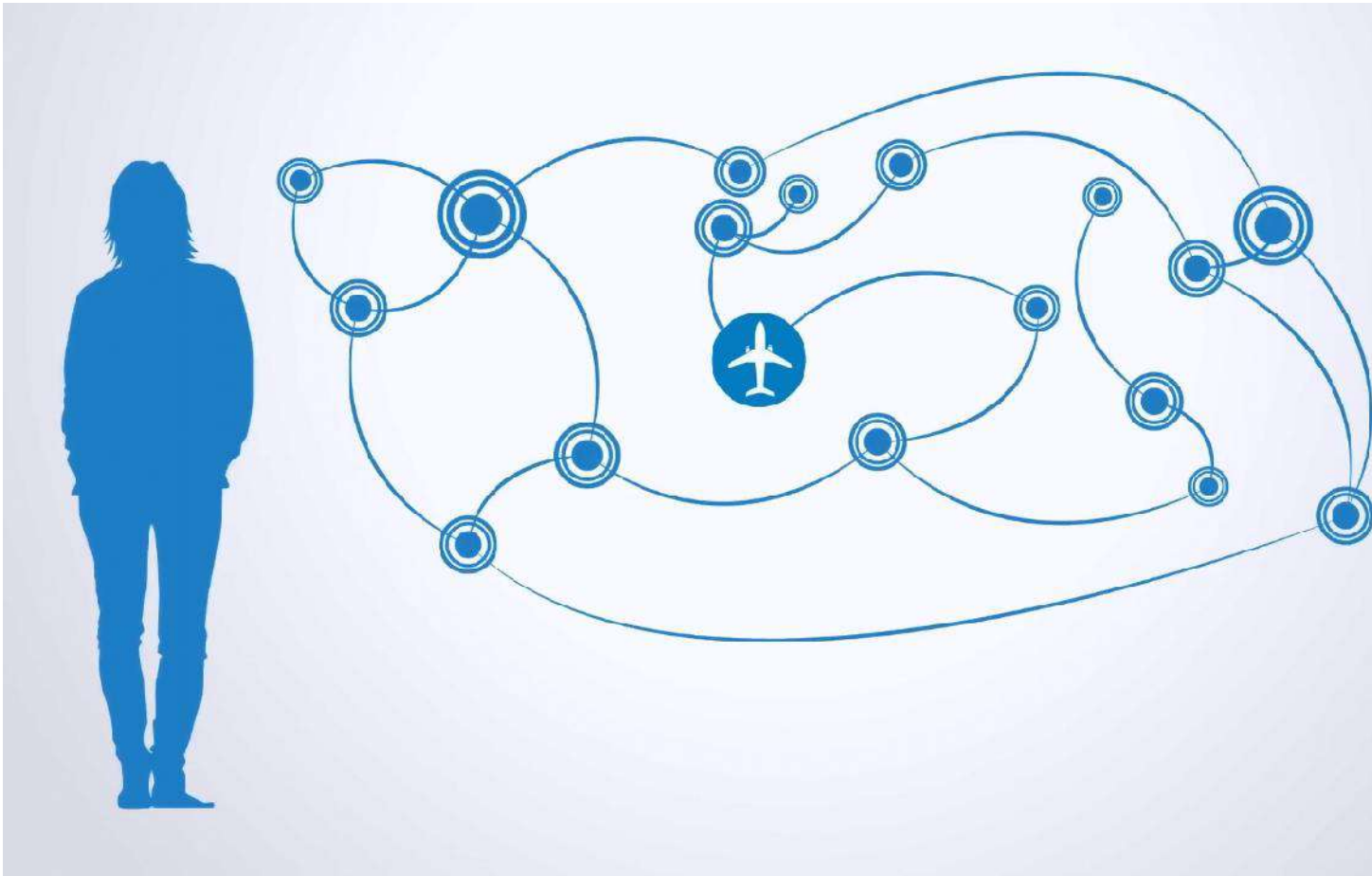
The iceberg model tries to illustrate the various levels of abstraction to a situation or organization from the observable **events** to underlying **patterns** that generate these to the supporting **structure** and ultimately the **mental models** used by an organization

## Whole system context



The iceberg model helps individuals and organizations to expand their **perception of a situation to see it within the context of the whole system** and not limit themselves to looking at just a single activity or event

## Step back and identify patterns



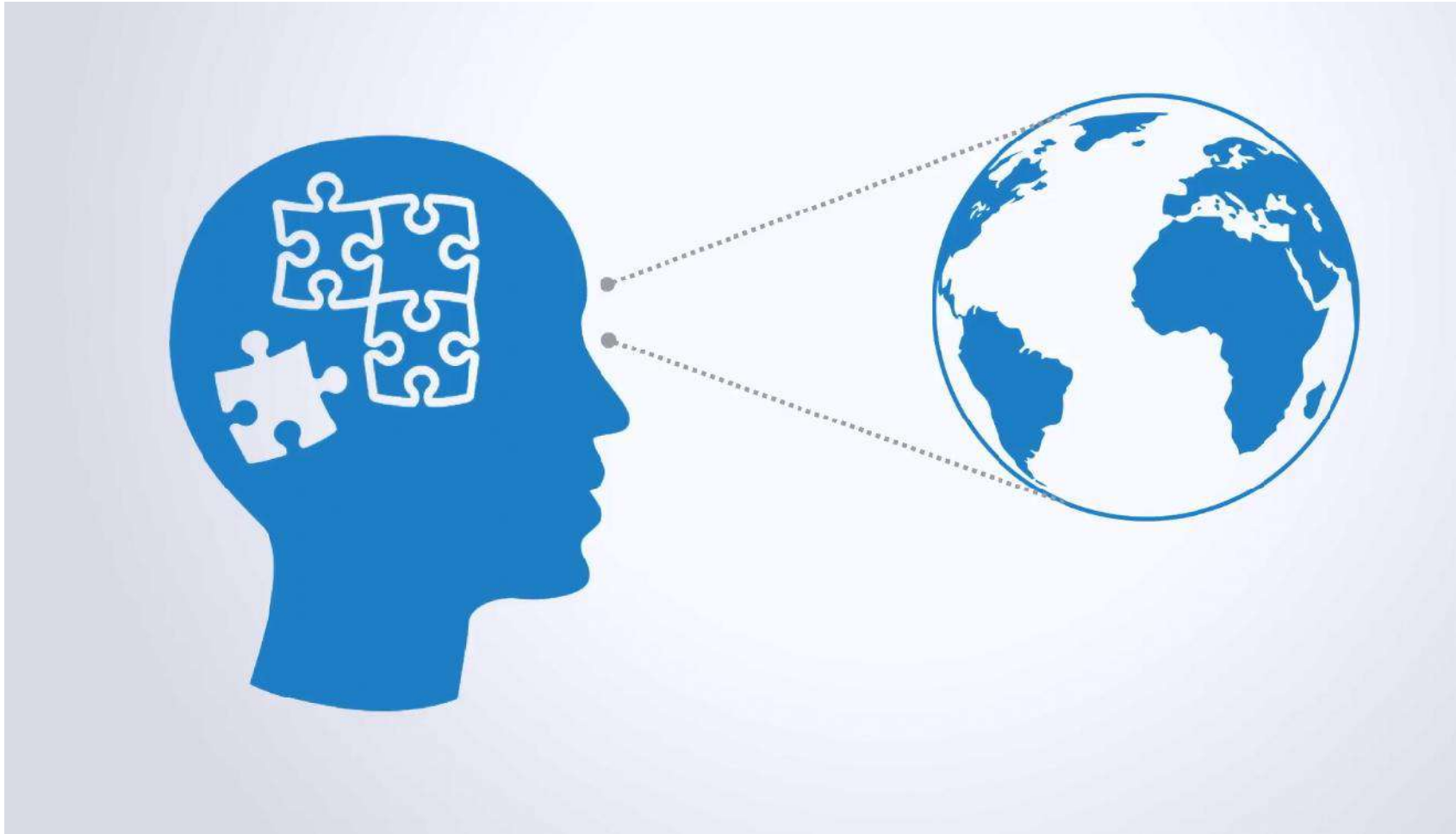
The iceberg model is designed to help people to step back and identify the different **patterns** that the **event** is part of the possible **structures** that might be causing it to occur and finally the **model that is creating those structures**

**Patterns – A series of inter-relationships between events  
(Trends over time)**



**When we get to the pattern level we can anticipate, plan and **forecast****

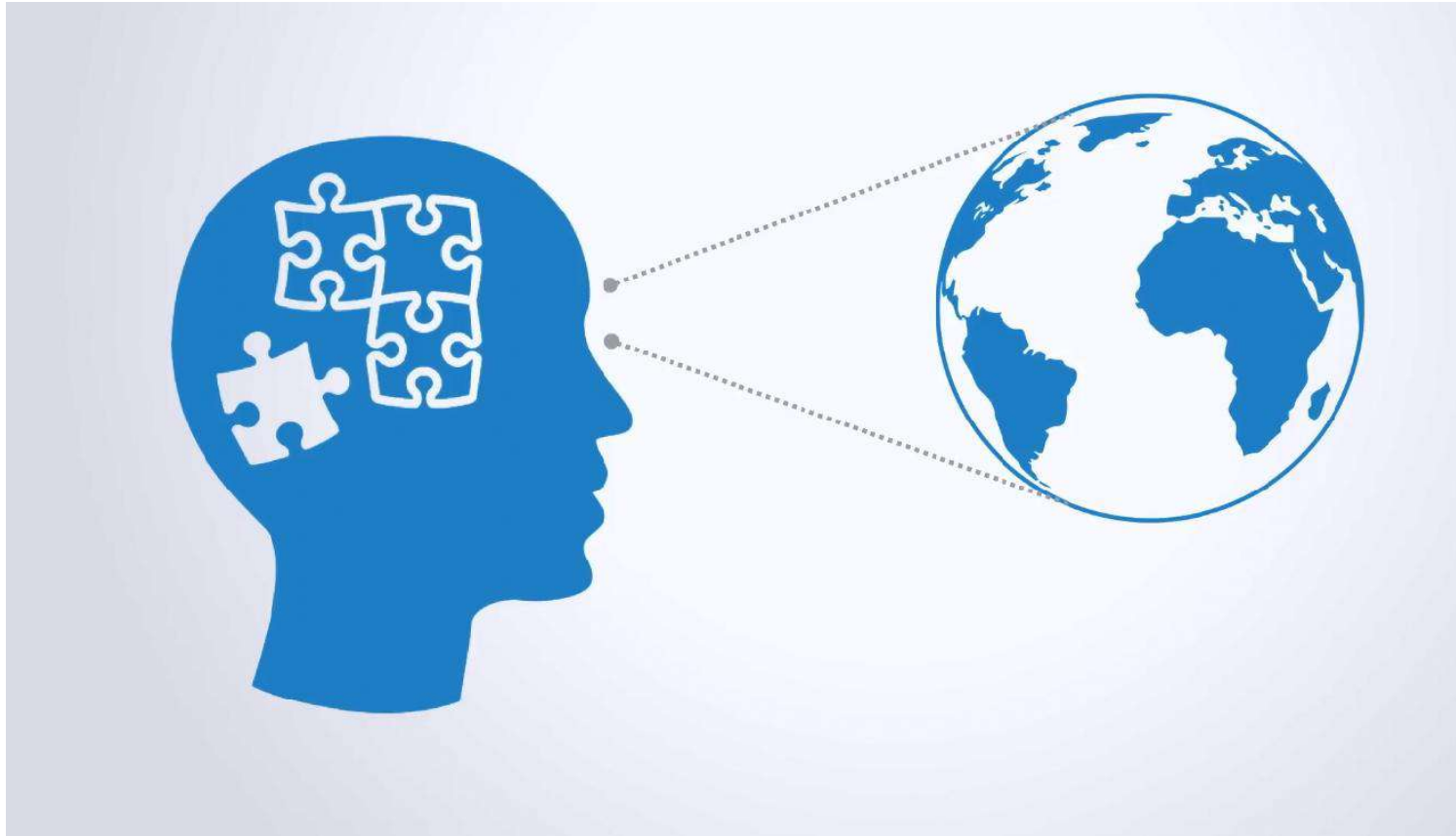
## Mental Models



**Mental models define the thinking that creates the structures that then manifest themselves in the patterns of events**

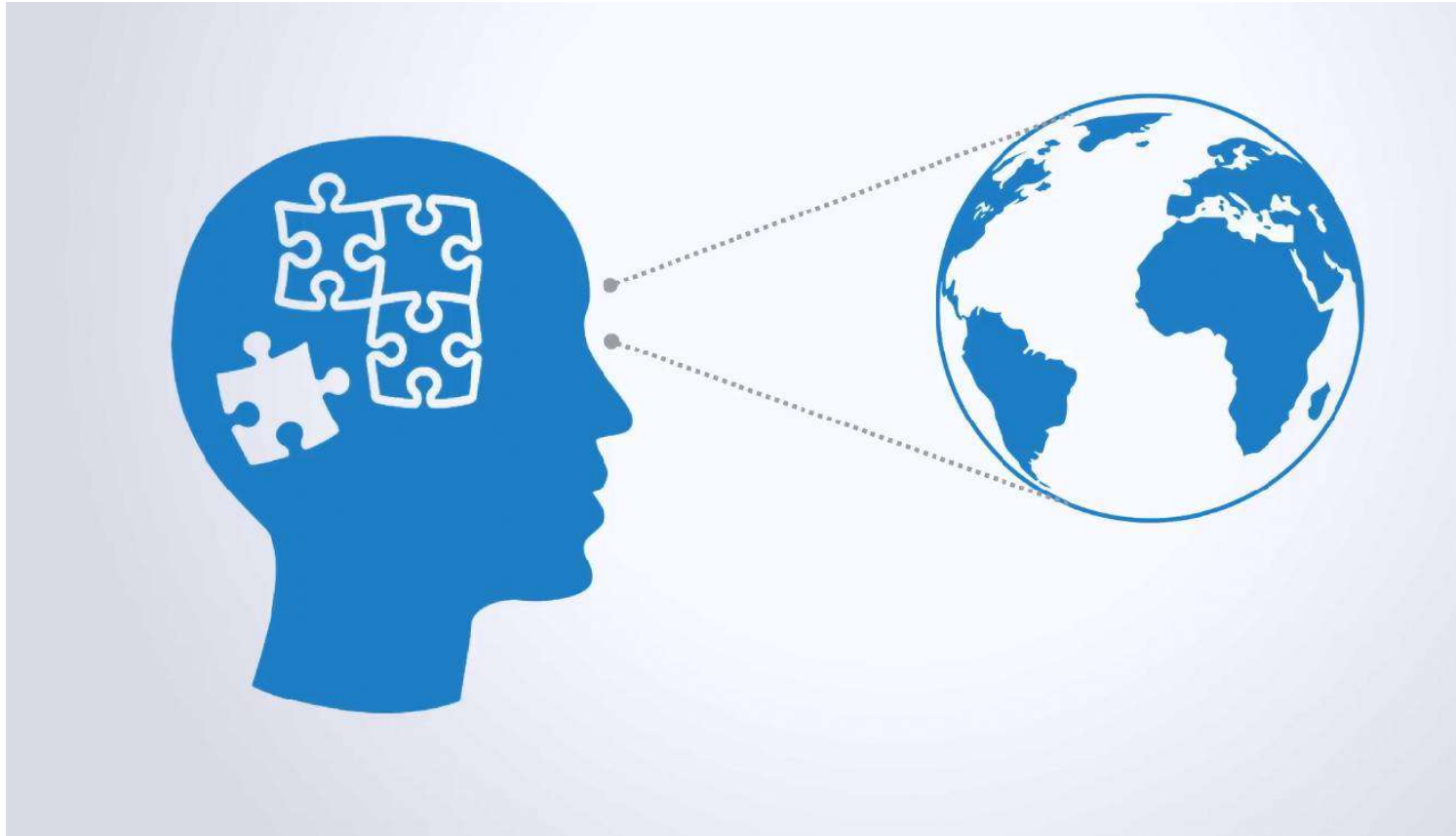


## Mental Models



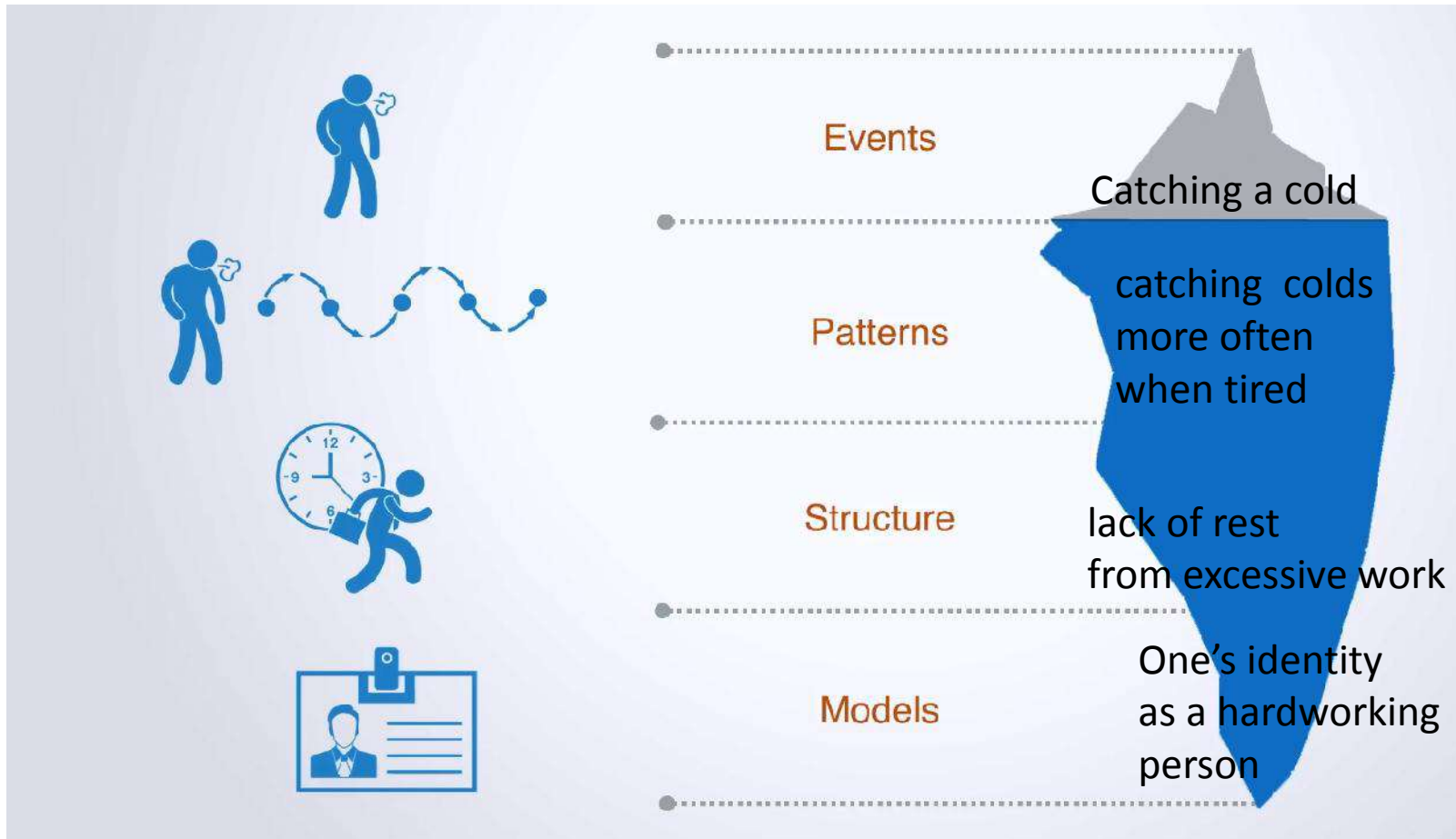
**Mental models are people's deeply held assumptions and beliefs that ultimately drive behaviour there is typically not just one pattern or structure or mental model at play there can be many**

# Mental Models



Mental models are the **attitudes, beliefs, morals, expectations, values, or culture** that allow structures to continue functioning as they are. These are the beliefs that we often learn subconsciously from our society or family and are likely to be unaware of.

## Example of the ice-berg model in our health



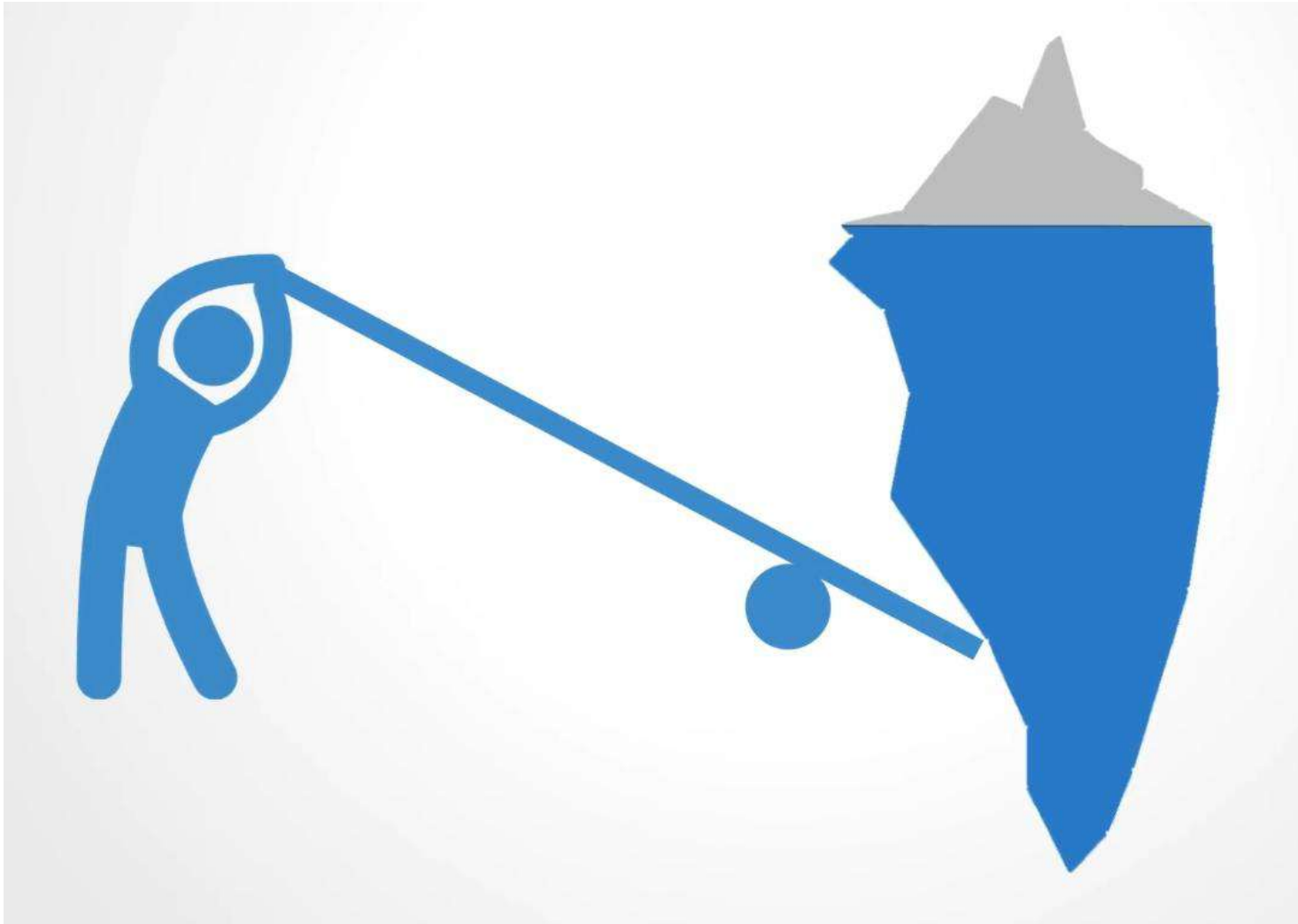
One tends to get caught up in the immediate **event** of suffering from a cold and typically forgets that it is part of a **pattern of events** that is caused by the **underlying structures** of our **lifestyle and perception**

## Leverage points in a system



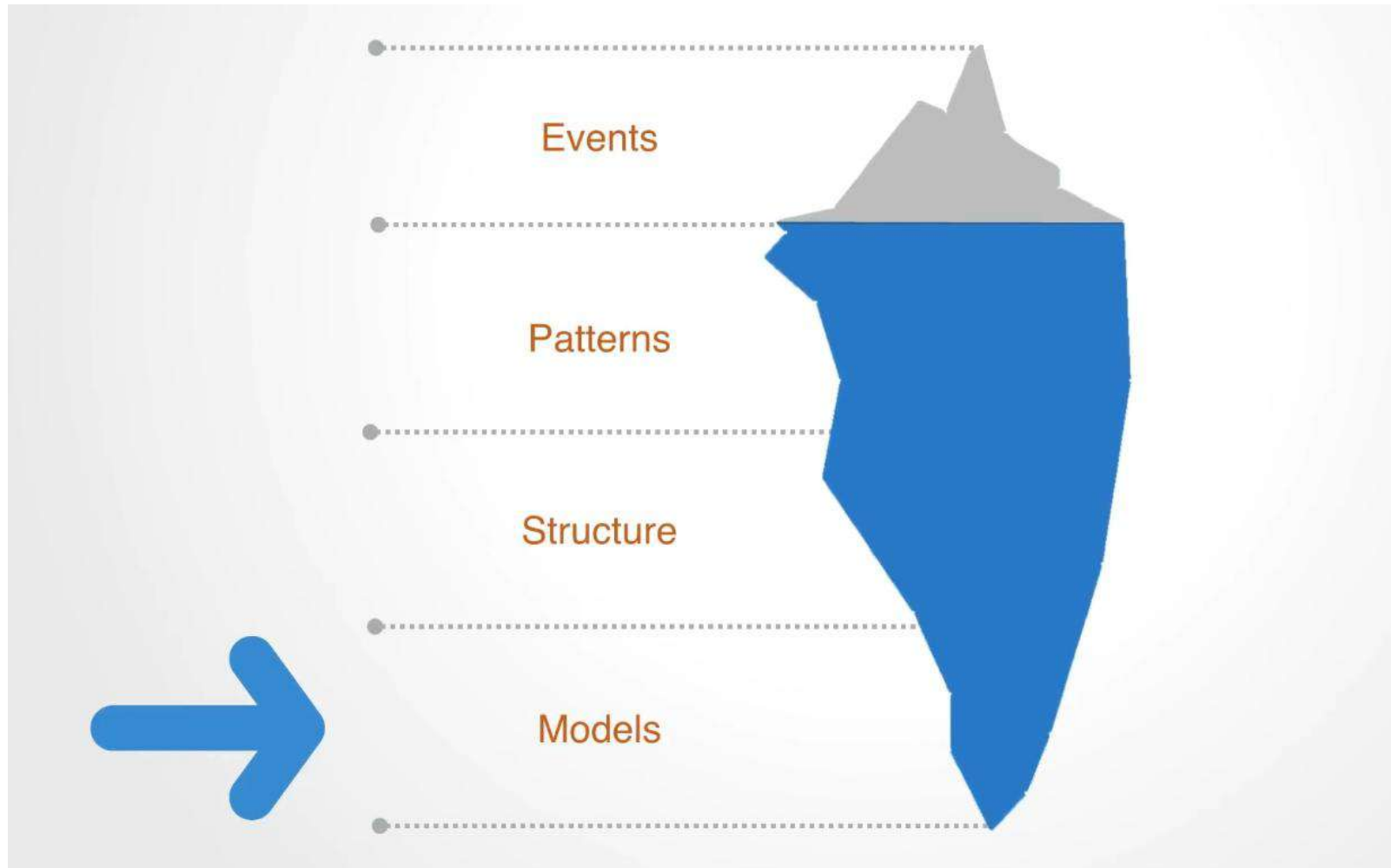
**A leverage point is a place within a system where small changes can have large effects**

## Leverage points in a system



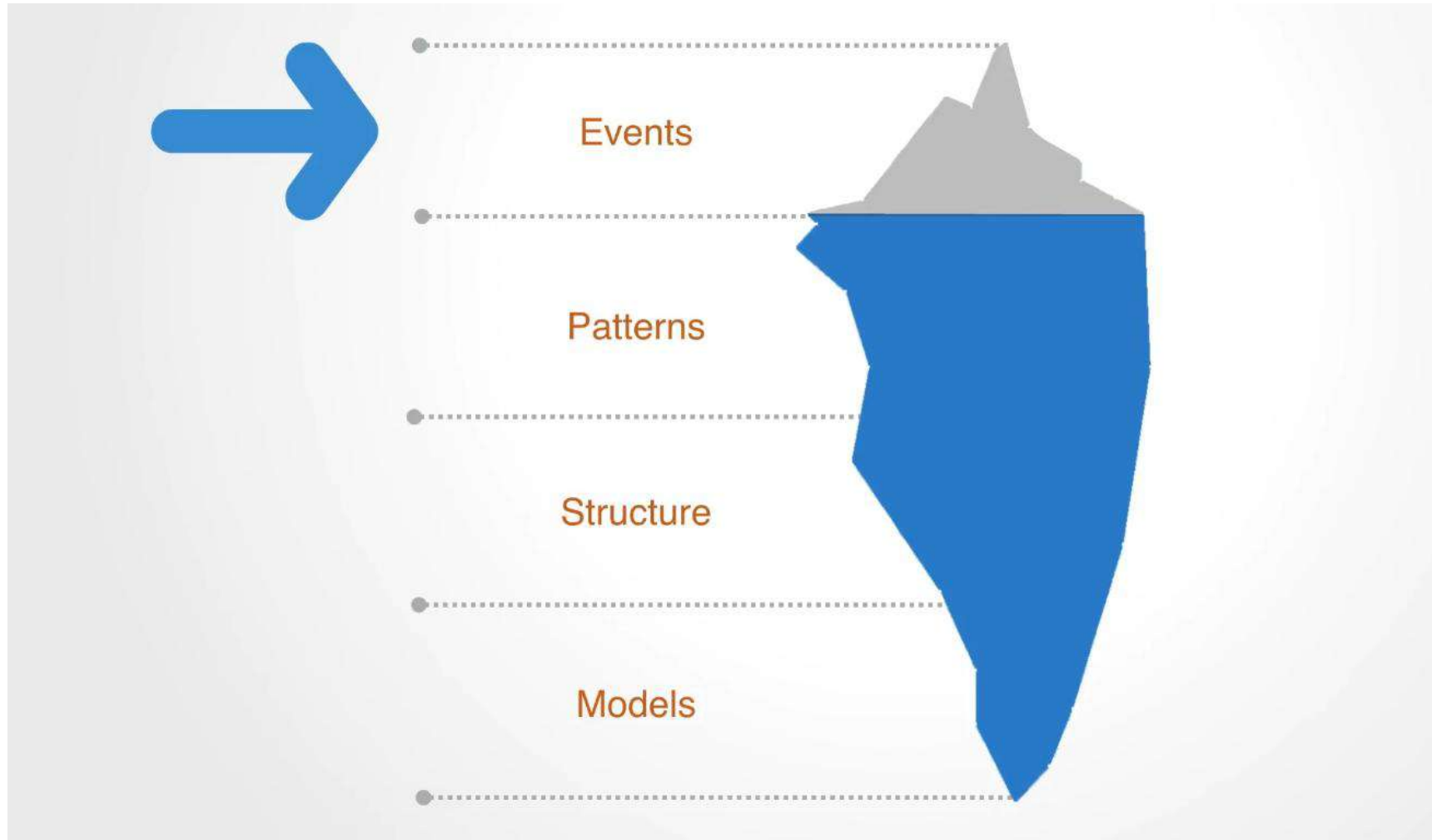
The lower we go in the iceberg the more leverage we have in transforming the system

## High leverage point in a system



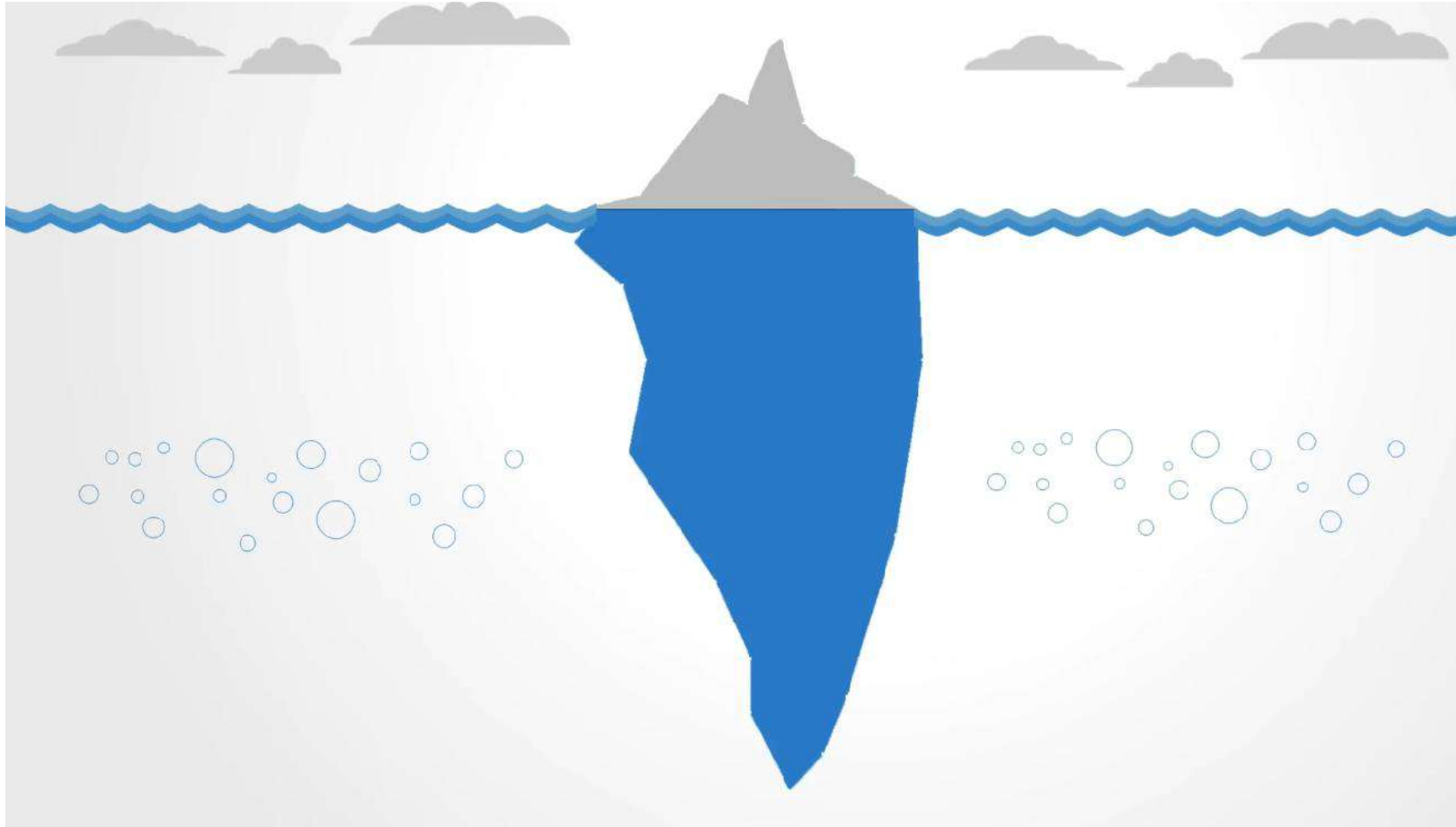
changing structures and influencing mental models has a broader far reaching effect in changing the system than reacting in the moment and firefighting discrete events.

## Low leverage point in a system



**The only way to find the leverage points is to find the root causes**

## The iceberg metaphor



**If we somehow altered the event on top without finding a solution to the cause, the buoyancy of the ice underneath would simply push up to recreate the tip again. As such only the most superficial of issues can be resolved at this higher level**



**Symptomatic responses attempt to push on the system at low leverage points**



**This works on easy problems because forces arising from root causes are small enough to be overcome by pushing on low leverage points**

## High leverage point in a system



**Systems change requires affecting the organization at high leverage points to resolve root causes**

## High leverage point in a system



This approach is required on difficult problems since **problem solvers can exert only limited amounts of force on a large system**

## High leverage point in a system



**If that force is applied at low instead of high leverage points it will be overcome by the forces of the innate dynamics of the system that arise from the root causes.**

When we start to notice a pattern within events , We have more options



We can anticipate what is going to happen and we can plan for it. When we start noticing patterns we can begin to consider what is causing the same events to happen over and over again – This is **FORESIGHT**

**J.W Forrester described complex systems as being counter-intuitive**

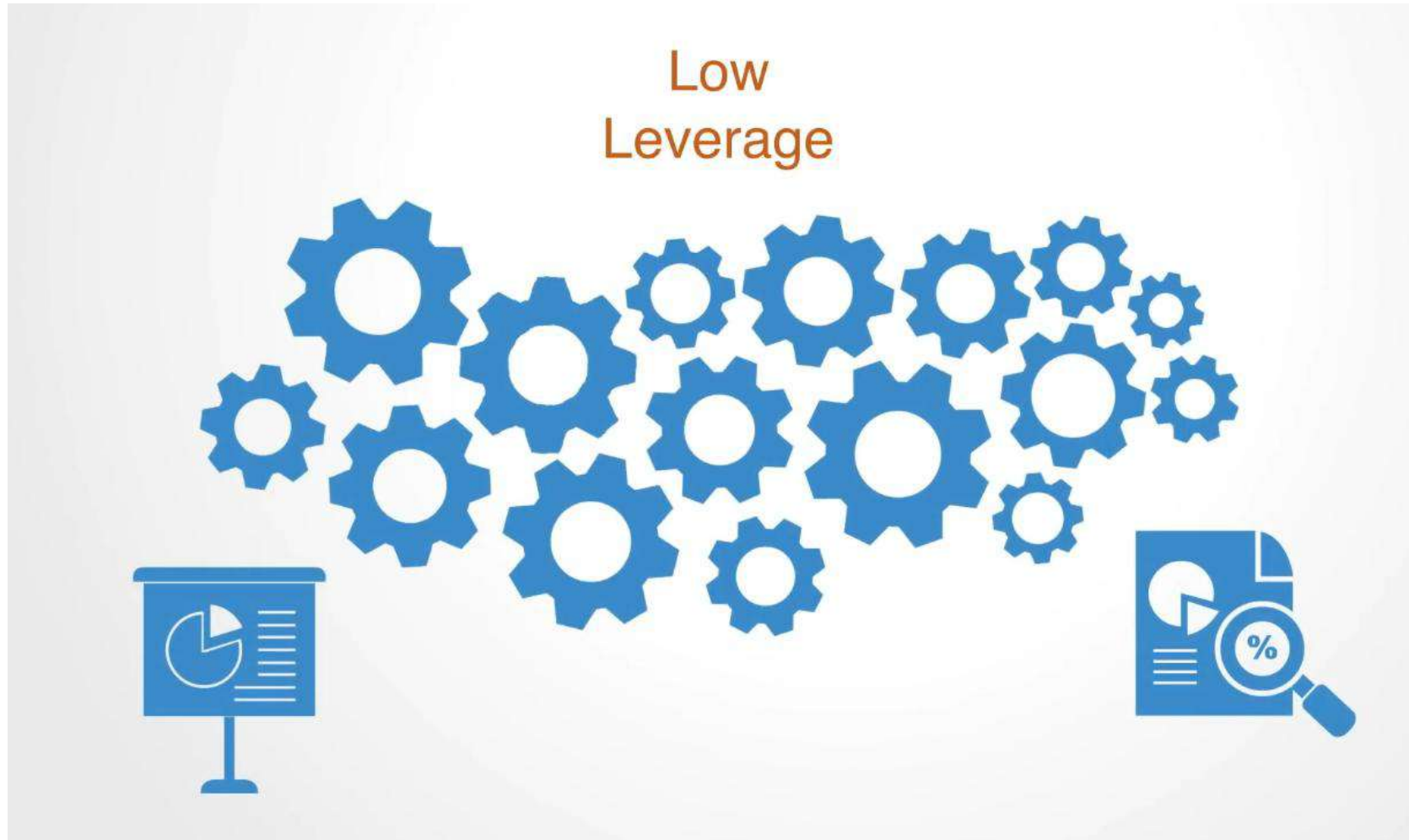


## Real systems change comes from a change in quality



**The high leverage points are in the qualitative parts of the system. They are things that are not being measured or accounted for, and thus they go largely un-noticed**

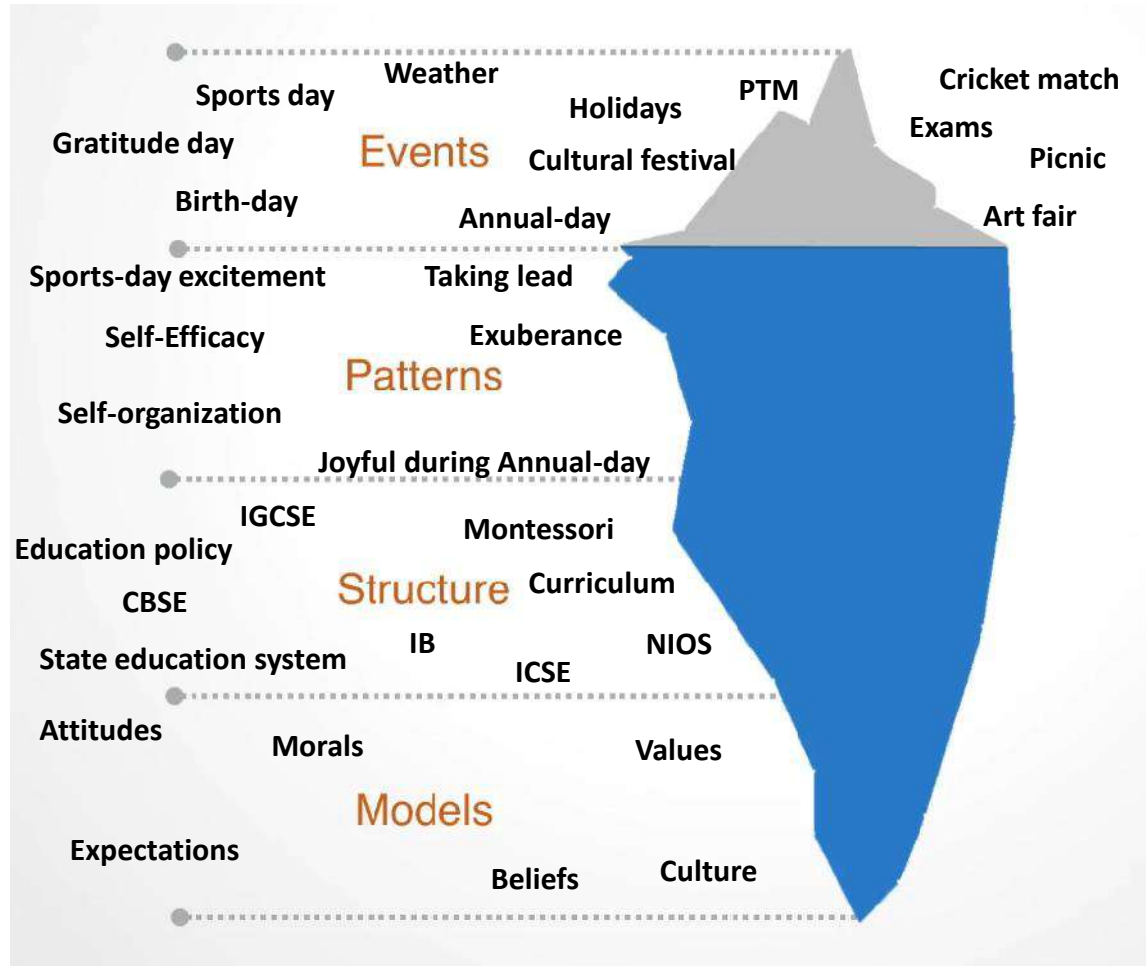
A reductionist analytical approach has led our cultures to place an **over emphasis on quantity and numbers**



This has given us the idea that **what we can measure** is more important than **what we can't measure**.

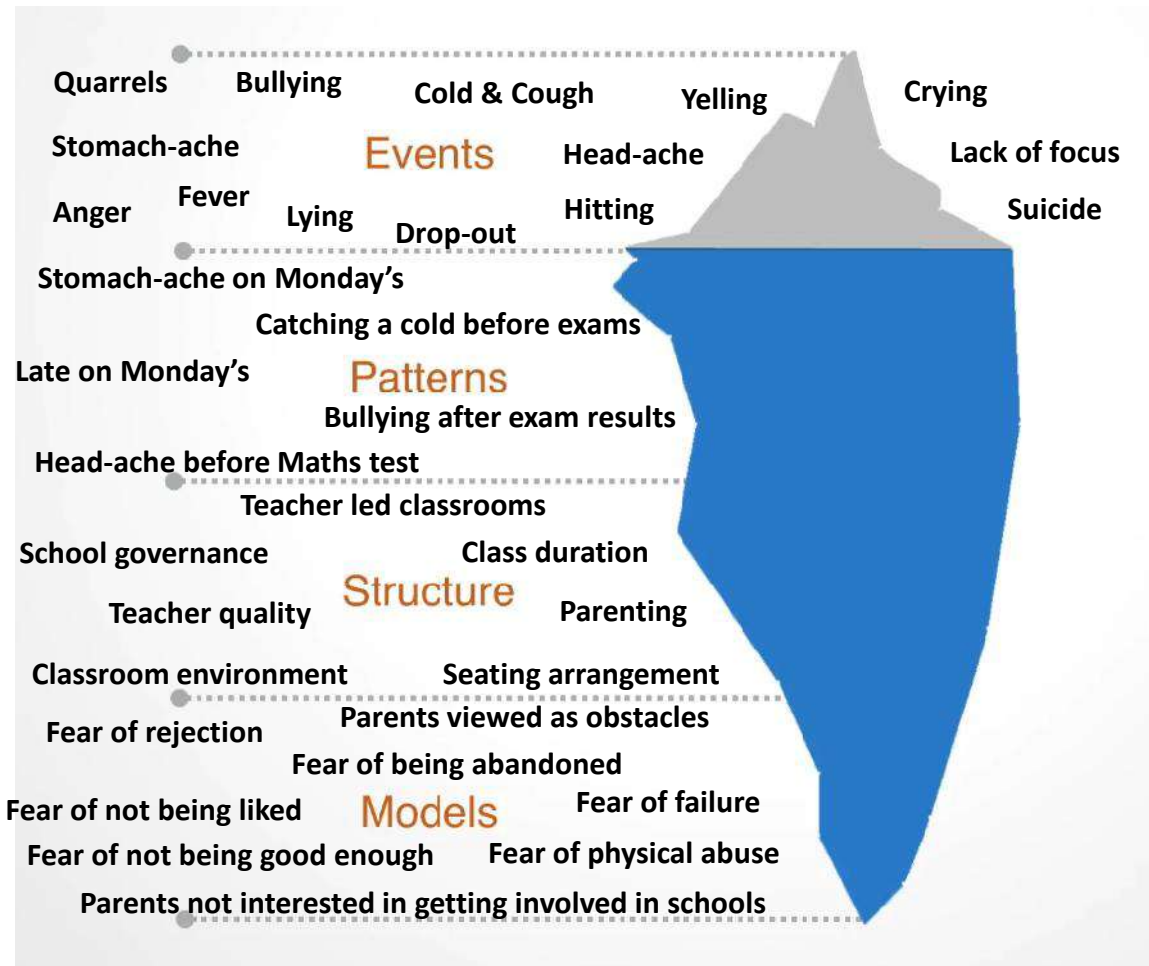


# The Education System Iceberg



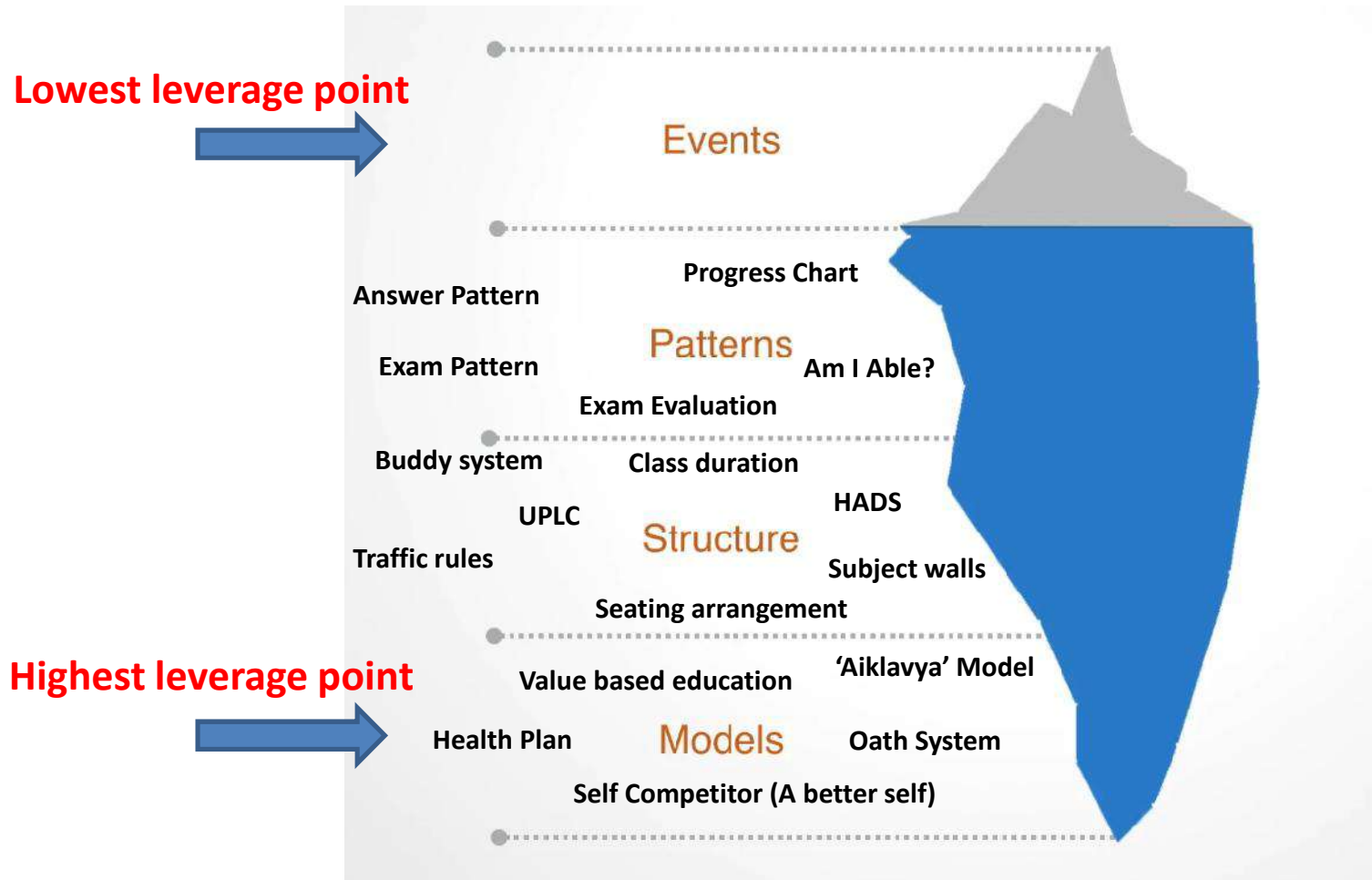
The Education System Iceberg above tries to illustrate any situation from observable **events** to underlying **patterns** that generate these to the supporting **structure** and ultimately the **mental models** used by the Education System

# The Education System Iceberg



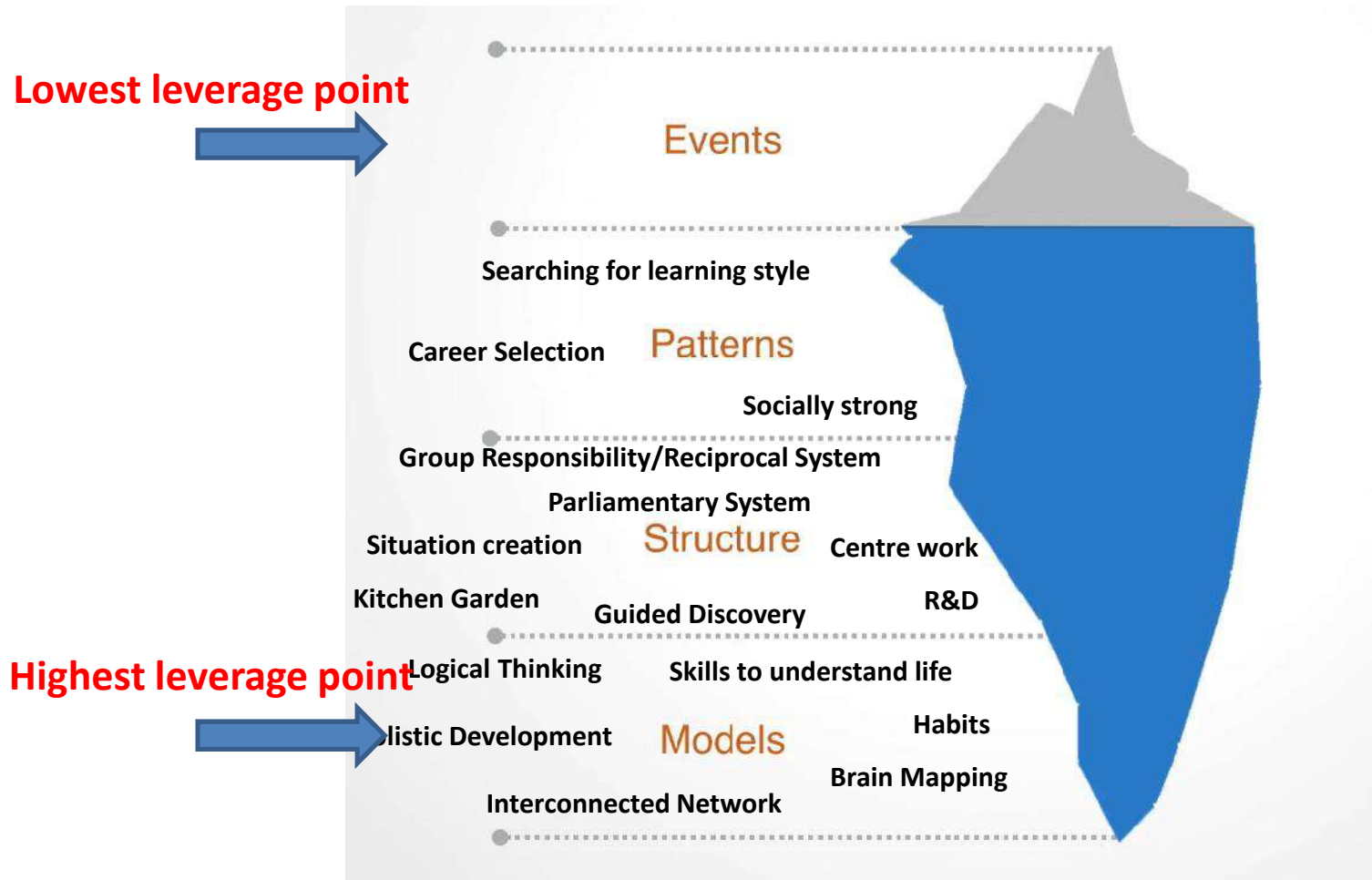
The Education System Iceberg above tries to illustrate any situation from observable **events** to underlying **patterns** that generate these to the supporting **structure** and ultimately the **mental models** used by the Education System

# Muni Education Methods applicable at various leverage points in the education system



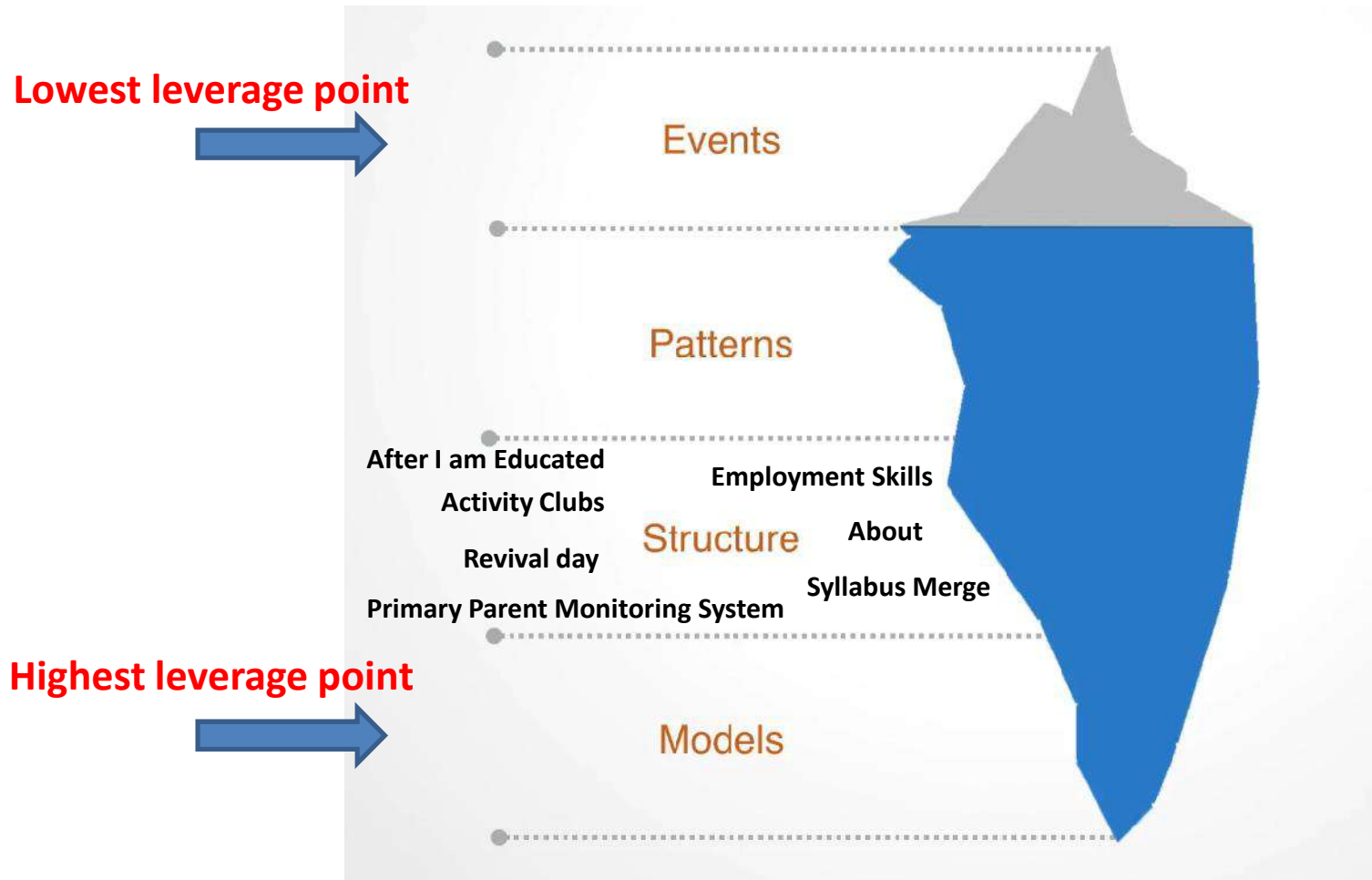
The lower we go in the education system iceberg the more leverage we have in transforming students and schools. In the above illustration the highest leverage is got at the **Mental Models** level

# Muni Education Methods applicable at various leverage points in the education system



The lower we go in the education system iceberg the more leverage we have in transforming students and schools. In the above illustration the highest leverage is got at the **Mental Models** level

# Muni Education Methods applicable at various leverage points in the education system



The lower we go in the education system iceberg the more leverage we have in transforming students and schools. In the above illustration the highest leverage is got at the **Mental Models** level

## Non Linear change is a qualitative change



In a systems normal state of operations it may well be that quantity matters most because it is in a linear regime but, **it is quality that creates change.** Nonlinear change is a **qualitative** change.

## Non Linear change is a qualitative change



It is one person who acts **qualitatively differently** by standing up and saying no, I will not take a bribe.

If you look at major changes like the fall of British Empire in India that was **accelerated** by a person that acted **qualitatively differently** to the way most people do

## Muni Model

The Muni Model is a set of methodologies that are conceptualized, designed and tested from 2002 till date by:  
Dr Ashok Kumar Thakur and his team.

The Muni Model  
*Transforming Schools and Students for a happier planet*



Several Muni Education methods work directly at the **mental model** level and thus intercept the **highest leverage point** in the education system! Some of the methods work at **structure level** and **pattern level** which are low leverage points but easier to implement.



## Muni Model

The Muni Model is a set of methodologies that are conceptualized, designed and tested from 2002 till date by:  
Dr Ashok Kumar Thakur and his team.

The Muni Model  
*Transforming Schools and Students for a happier planet*



Several Muni Education methods work directly at the **mental model** level and thus intercept the **highest leverage point** in the education system!

This has inherent potential for **non-linear change** or **disruptive innovation**!