

THE TECHNOLOGICAL GAPS IN THE PRACTICE OF PHARMACY

PHARMACY

SHAPING THE FUTURE

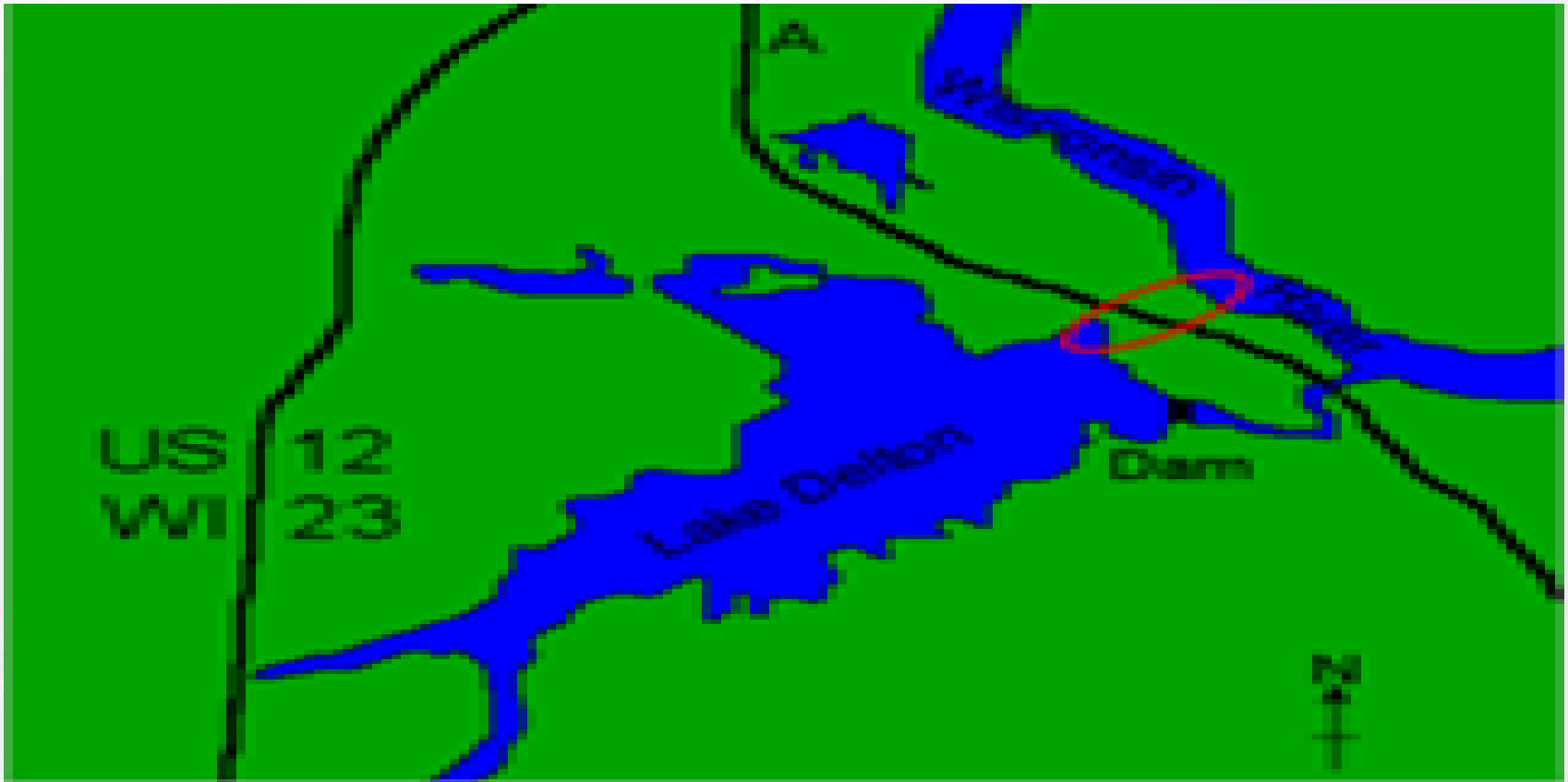


The lake Delton Story 1927-2008



The Lake Delton story 09/06/08

...and then there was a breach on highway A



Lake Delton: 9 June 2008

A portion of a highway that forms part of the dyke wall eroded on 9/06/08, The resultant flood washed away entire homes and everything in its path



Delton 2008: The first summer in 81 years without the lake

The resultant wash out from the breach emptied the entire lake, leaving only mud pools in the middle of a resort town– Nobody could ever understand how a huge lake could be emptied in just 4 hours



EMERGING TECHNOLOGIES AND THE PHARMACEUTICAL INDUSTRY : 2030

A SUMMER WITHOUT THE LAKE ?

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The pharmaceutical Industry- our lake

We have secured a trillion US\$ industry over 200 years - the pharmaceutical market consumes anything and everything that we give it.

- ➔ We can afford to use medieval and sadistic treatment techniques**
- ➔ We still offer bitter, foul unpleasant dosage forms**
- ➔ We confidently pass the burden of product preservation to consumers**



...can anything ever drain this lake ?

..highly protected by laws and regulations governing registration, patenting, testing, safety, efficacy and marketing of drugs

- ➔ long “lab to market” lead times**
- ➔ High technology**
- ➔ Expensive research**

We have built a wall so thick and so high around our lake

..but bad things are happening to others like us..

- ➔ Post and telecommunications**
- ➔ The media industry and journalism**
- ➔ The music and record selling industry**
- ➔ The paper industry**

New technologies have redefining the concept of industries and markets and what it means to be in business

...what happened, what did they do wrong...

“Nothing”

- ➔ The market did not even change but...it just could be serviced by other new industries using emerging technologies not controlled by their laws , regulations and barricades
- ➔ The industries could not adapt fast enough to emerging technologies because they were controlled by their laws, regulations and barricades

...What's the message for us..

**Technology is going to advance and there is no stopping it, even if it ruins somebody's Industry
You either get on board or get left behind**

“It is neither the fastest , the biggest, the smartest nor the most ferocious animal that survives evolution, it is only the one that is most adaptable to change”

(Charles Darwin 1809-1882 & Alfred Wallace 1823-1913)

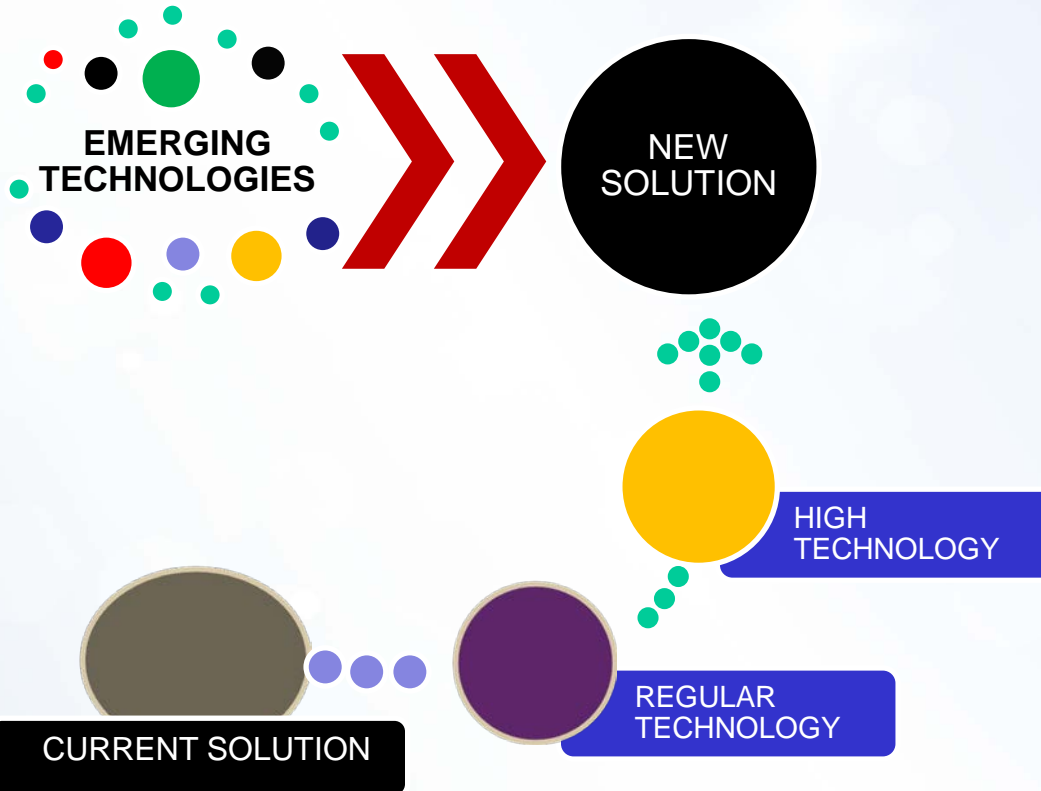
.....Emerging technologies?

Non conventional innovations broaching new frontiers offering novel competitive advantages

...these technologies include nanotechnology, Biotechnology, ICT, Artificial intelligence etc

Technology cores

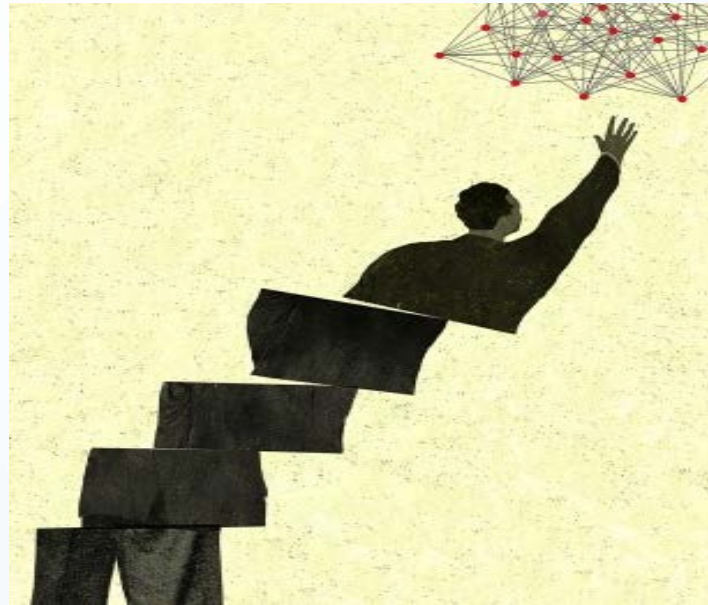
disruptive innovation



Sustained innovation

Emerging technologies

... have created a technological mudslide for our industry and what it takes to remain in business



..patient related issues

- ➔ **Diminished classical separation of practitioners and patients by promotion of self reliance, self diagnosis and self medication**
- ➔ **Rampant unstructured dissemination of critical medical information**
- ➔ **Transformation of the qualitative nature of procedures and treatments and their relations**



... professional issues

- ➔ **Affects the skills required and sought , roles played and areas of specialization in the pharmaceutical industry**
- ➔ **Rearrangement of the bouquet of professional skills leading to redundancy and mass job extinction**
- ➔ **Expensive training and retraining of employees**



....Training issues

Knowledge no longer resides in systematic studying ,books, brilliant minds or super databases but a complex relational pattern of networks brought forth to coordinate human action by emerging technologies which has a capacity to revolutionize the traditional pharmaceutical industry system



What can we do

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...We must disrupt our lake before somebody else does.....identify, adopt and adapt to emerging, potentially disruptive technologies before they overtake the traditional sustaining technology

..then what should we do

....after correctly identifying potentially disruptive technologies, we must circumvent unnecessary regulations and bureaucracy that can stifle the free pursuit of creative ideas



What should we do

Pharmacists must embrace the perspective of ‘constructive disruptive innovations’ through adaption and adoption of CTs

Current systems/technologies ‘constructively’ integrated with newer innovations yet ‘disruptively’ impacting on conventional processes and treatments for better healthcare delivery



“ADAPT OR DIE”

(Charles Darwin 1809-1882)

