



# Developing a Mindset for Innovation & Entrepreneurship

**Abderazek Ben Abdallah, Professor**

University of Aizu

School of Computer Science and Engineering

Division of Computer Engineering

Adaptive Systems Laboratory



# Innovation & Entrepreneurship

---

- Why is business changing?
- Several decades ago, efficient, and manageable companies have become large unmanageable organizations.
- Industries are evolving and transforming very fast
  - It took radio 38 years to reach about 50 million listeners.
  - It took the Internet only 5 years to reach more than 40 million users.



# Creativity is the Fuel of Innovation

---

- Innovation does not only involve technology.
- It can represent a unique **strategies** like Amazon.com, **pricing strategies**, **Convenience** like SevenEleven and Lawson, or **manufacturing** like Sony or Hitachi.



# Creativity: What is it?

---

- It can be anything.... In most cases we associate it with **artistic endeavour** – writing, painting, making music.
- We can also be creative in **programming, computer design**, etc.



# Why is Creativity Important?

---

- All business sectors seek **innovation**
    - Consumer products; Media; Fashion; Travel, etc.
  - Even conventional sectors needs novelty, e.g. medicine seeks new formulations of existing drugs.
  - A continual drive for innovation suggests that **creative thinking** is the key!
-



# Why is Creativity Important?

---

*“There is no doubt that creativity is the most important human resource of all. Without creativity there would be no progress, and we would be forever repeating the same patterns”*

*(Edward de Bono).*



# Who is Creative?

---

- Are creative people **born** or **made**?
- We know from the literature that creativity can be **innate**, but can also be **learned**.



# **Creativity Leads to Innovation**

---

- Glass (3500 BC)
- Modern Public Library (1850-1945 depending on country)
- Electronic calculator (1961)
- Mobile phones (1973)
- World Wide Web / Internet (1989)
- Email (1993)



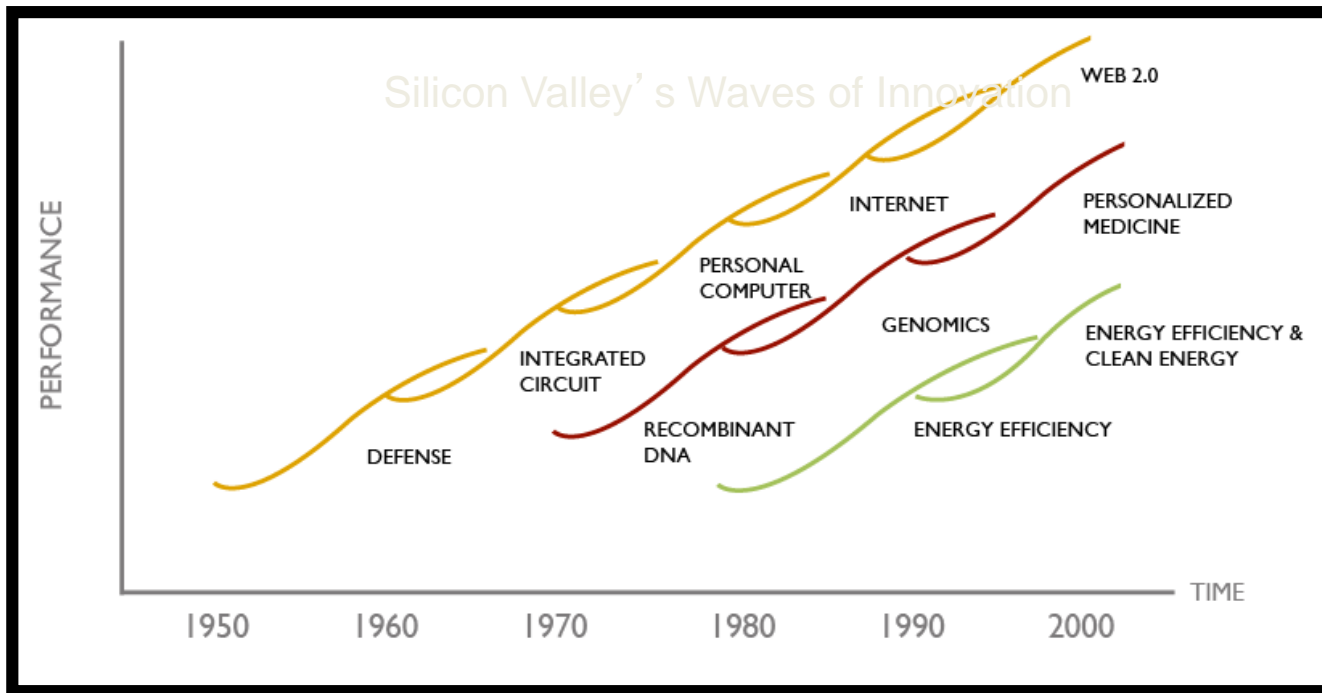


# Silicon Valley

Our most important characteristic:

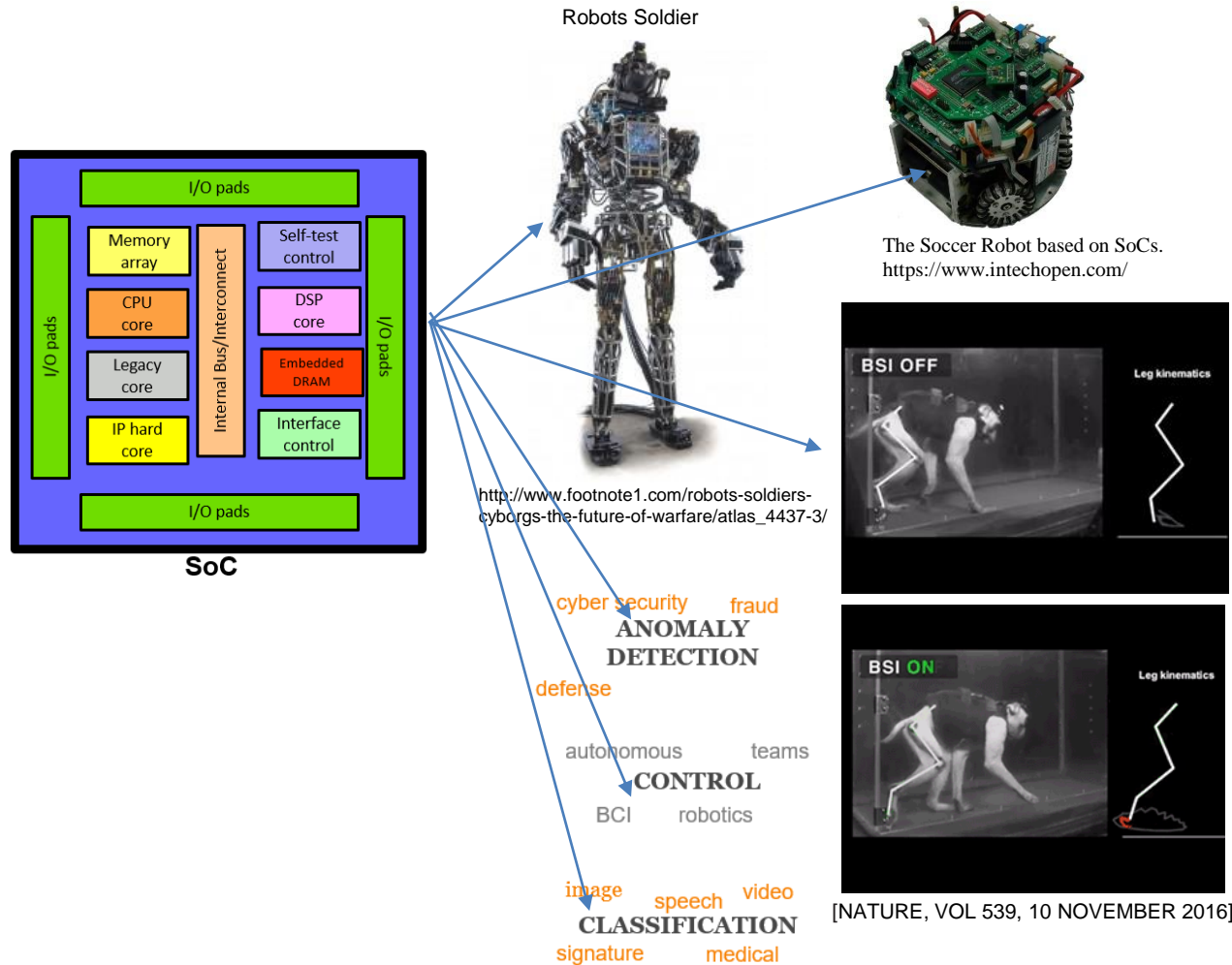
***We keep re-inventing ourselves***

Russell Hancock, Joint Venture Silicon Valley, Silicon Valley Institute for Regional Studies, 3 August 2015



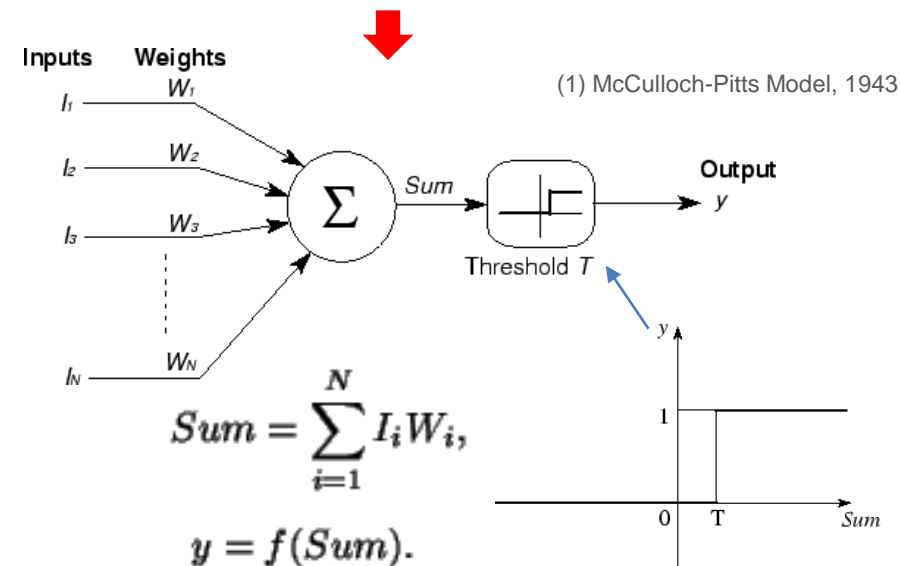
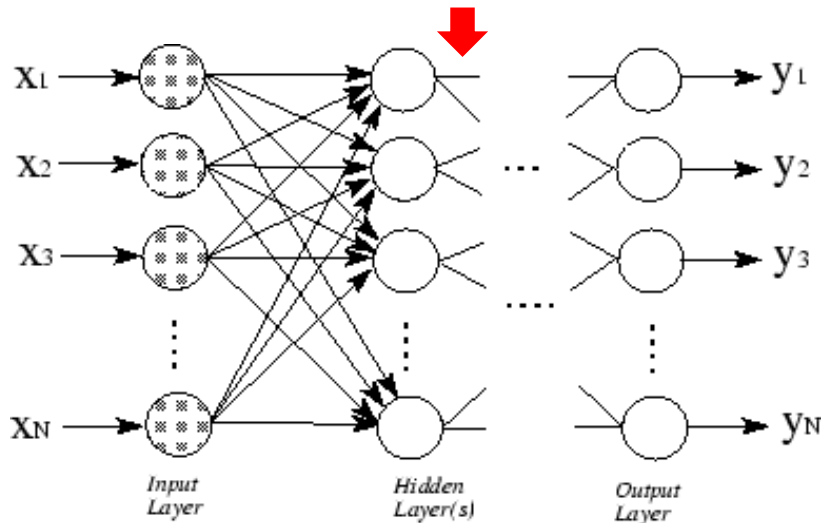
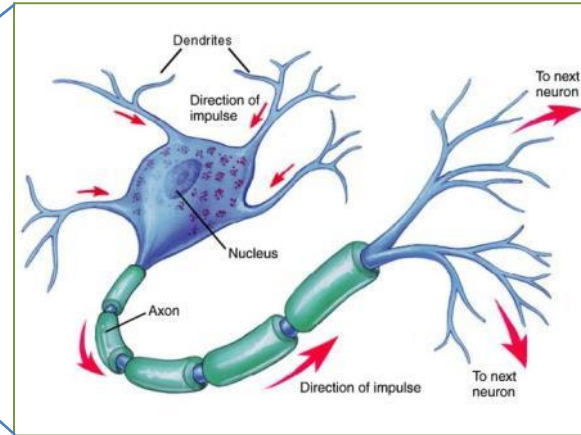


# New Meaning, New Concept (1)





# New Meaning, New Concept (2)





# New Meaning, New Concept (2)

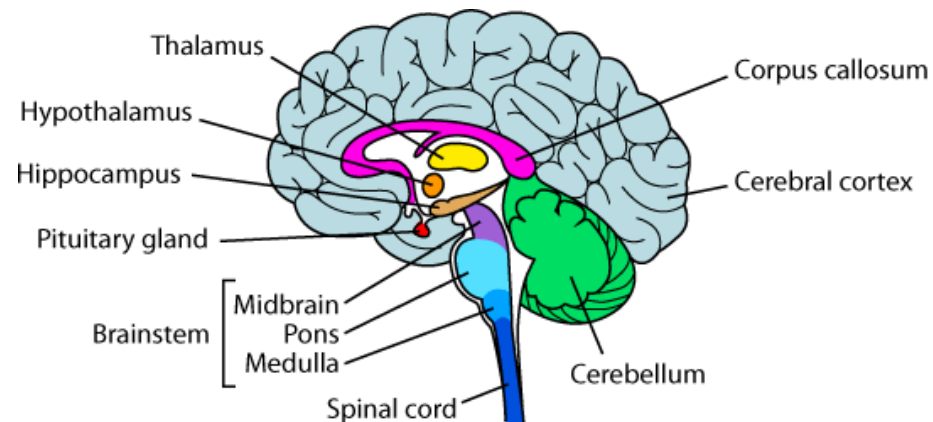
- **Computer**

- Calculation
- Precision
- Logic



- **Brain**

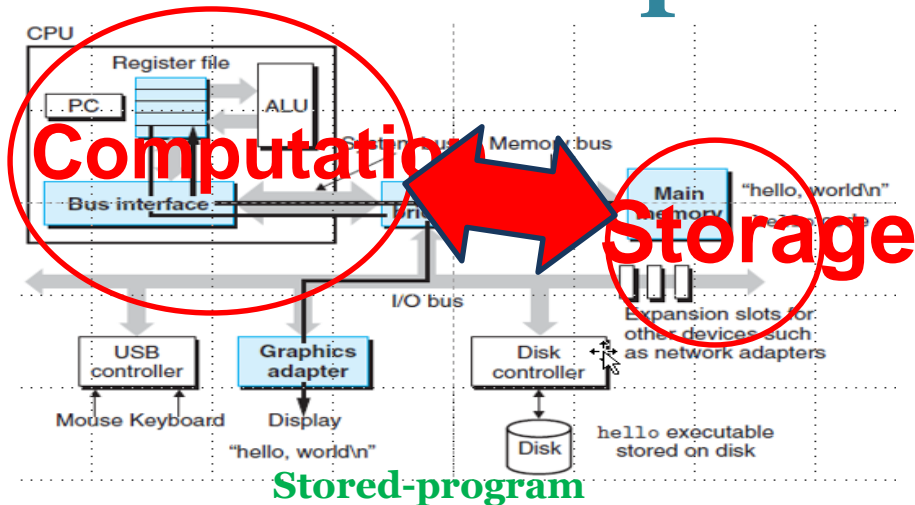
- Pattern Recognition
- Noise Tolerance
- Complexity



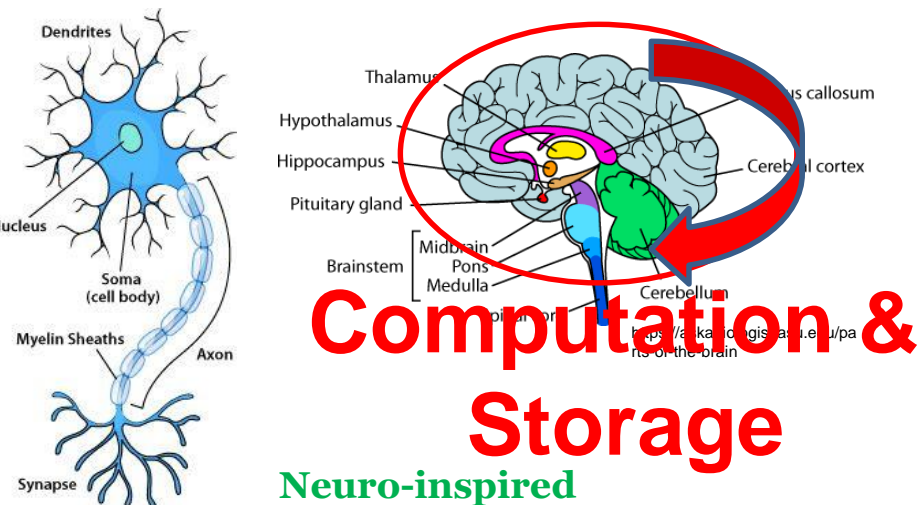


# New Meaning, New Concept (2)

## Computer Vs. Brain



- High Power
- Storage and computation are separated
- Poor at recognition



- Low Power
- Storage and computation are not separated
- Good at recognition





# New Meaning, New Concept (3)

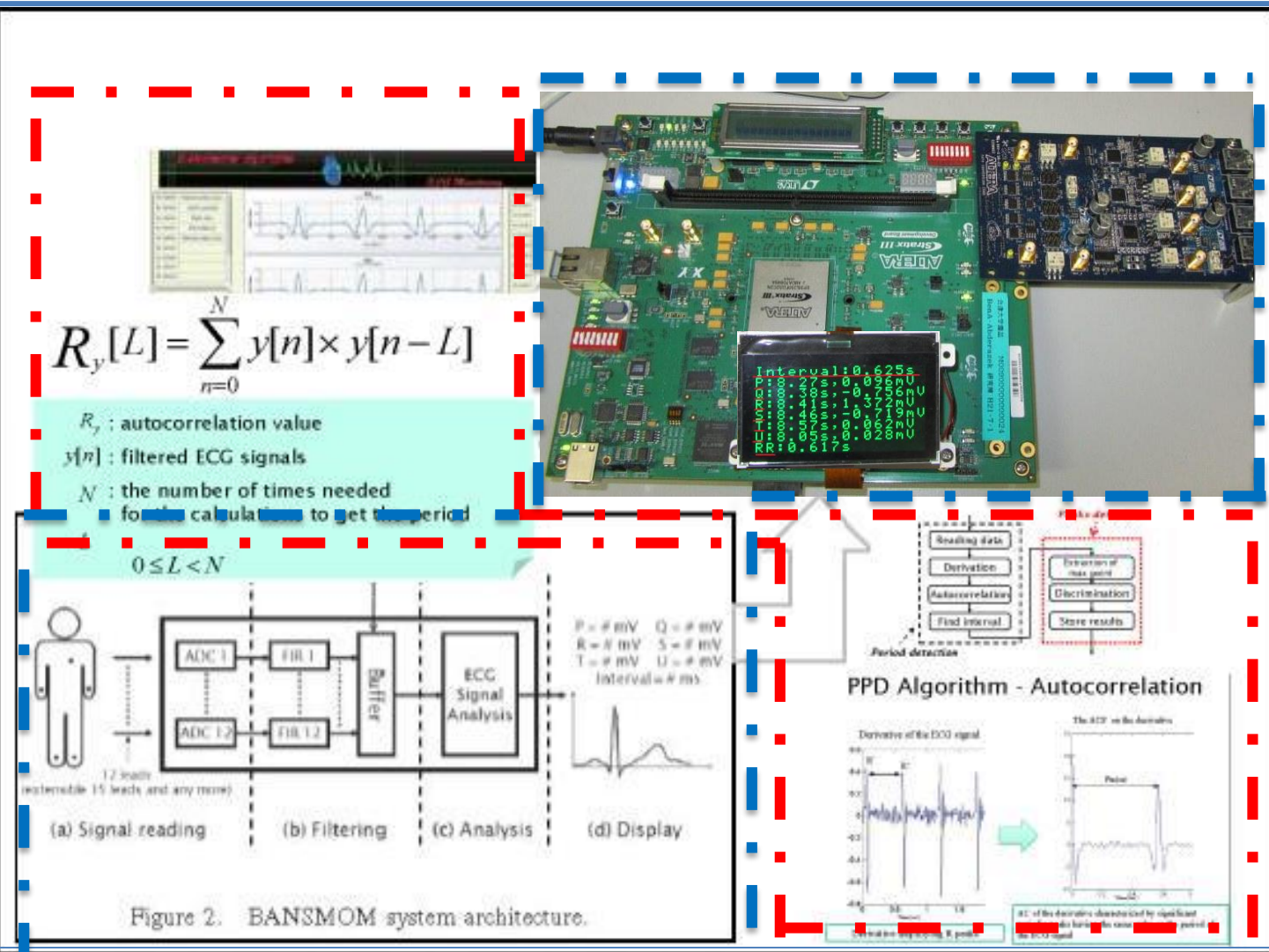
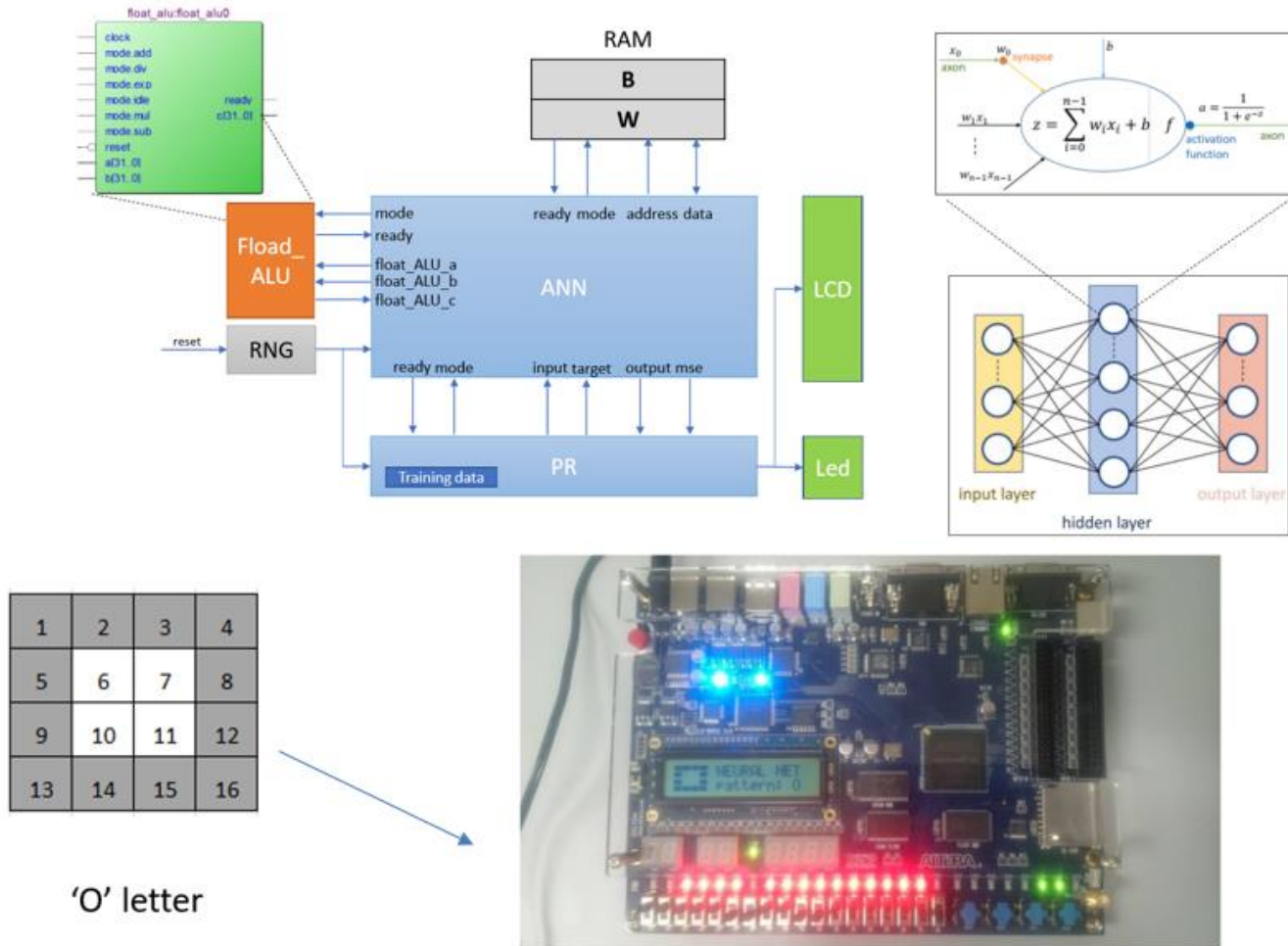


Figure 2. BANS MOM system architecture.



# New Meaning, New Concept (4)





# Mastering the Globalization of Business



2009.AUST.jpg



2010.HKUST.jpg



2010\_AUST.jpg



2011.HKUST.jpg



2011\_HUST.jpg



2012\_HUST.jpg



2013.HKUST.jpg



2014\_HUST.jpg



2015\_HUST.jpg



AUST\_Abuja\_2016.JPG



AUST\_Abuja\_2016-2.JPG



lecture\_given\_to\_Medical\_Doctor\_Aizu\_Hospital





# Mastering the Globalization

- 1) A creative thinker.
- 2) A problem solver.
- 3) Able to collaborate.
- 4) Able to communicate effectively.



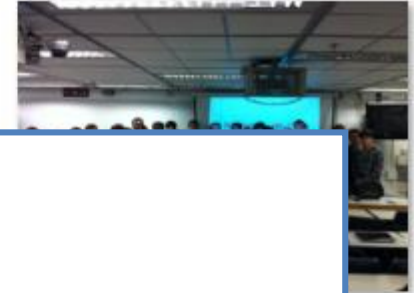
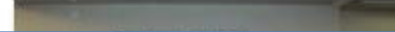
200



201



2015\_HUST.jpg



AUST\_Abuja\_2016.JPG



AUST\_Abuja\_2016-2.JPG



lecture\_given\_to\_Medical\_Doctor\_Aizu\_Hospital



---

# Thank you for your Attention.