



26th annual **INCOSE**
international symposium

Edinburgh, UK
July 18 - 21, 2016

‘Echoes from the Field’

A Study Outcome and Discussion:
Reflections on Software Systems
Engineering Practice

By: Raid AlQaisi

Wed 20th July 2016

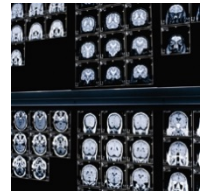
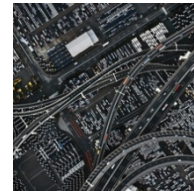
Research



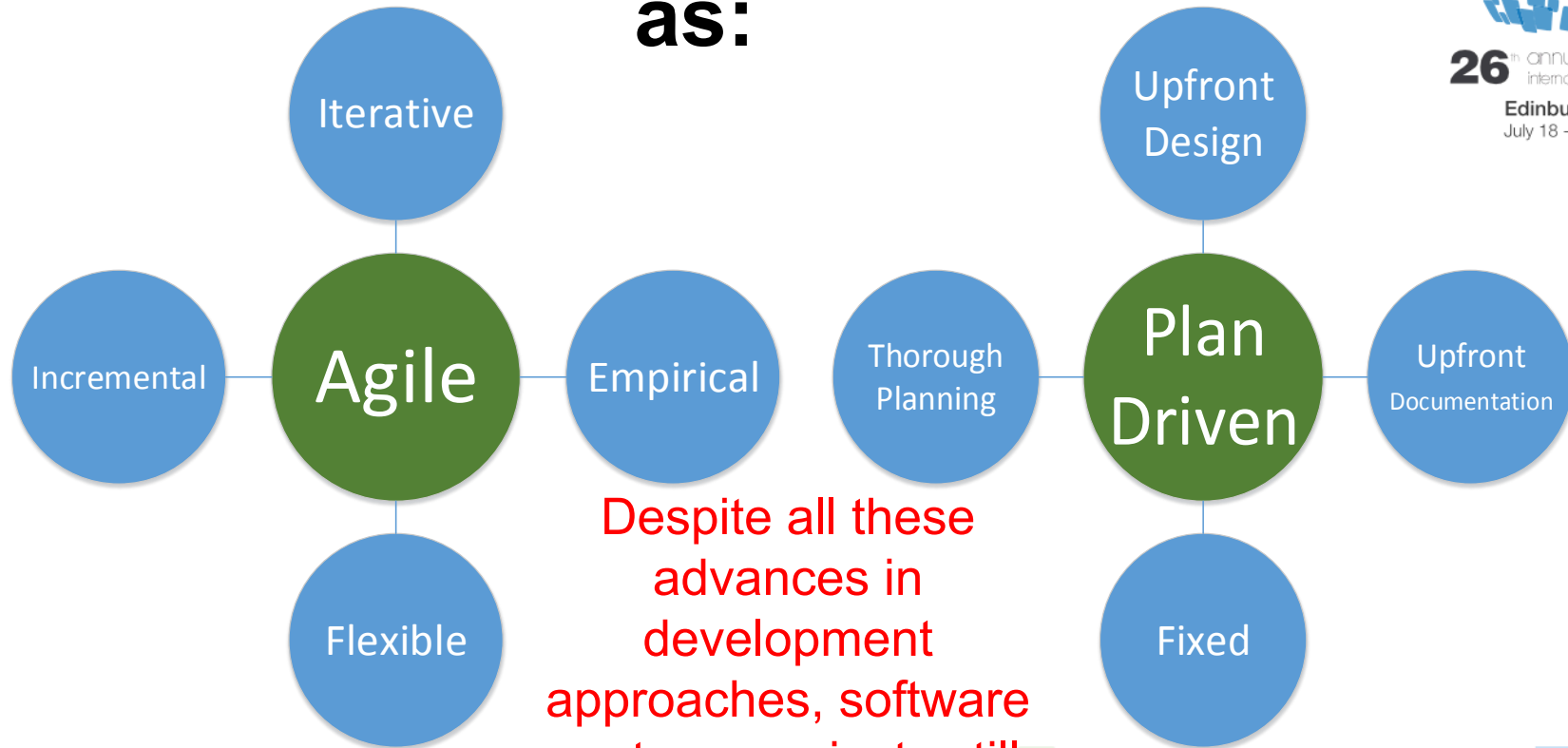
- Investigating the reality of software development practices in industry
- Based on observations of software engineers perception, experiences, and opinions

Background

The current state of software engineering is creation of systems needing a level of maintenance and support that would be considered totally unacceptable in other engineering fields.



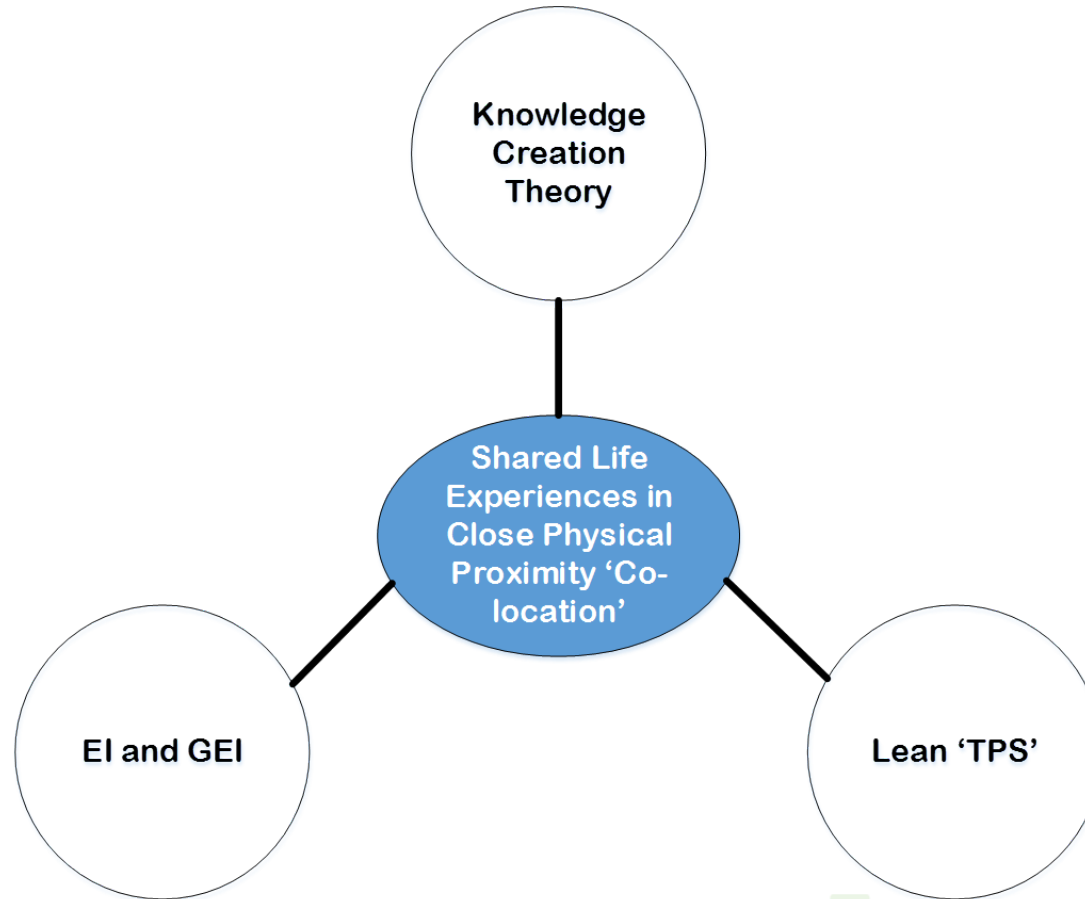
Software development can be grouped as:



Despite all these
advances in
development
approaches, software
systems projects still
fail!

Key Findings



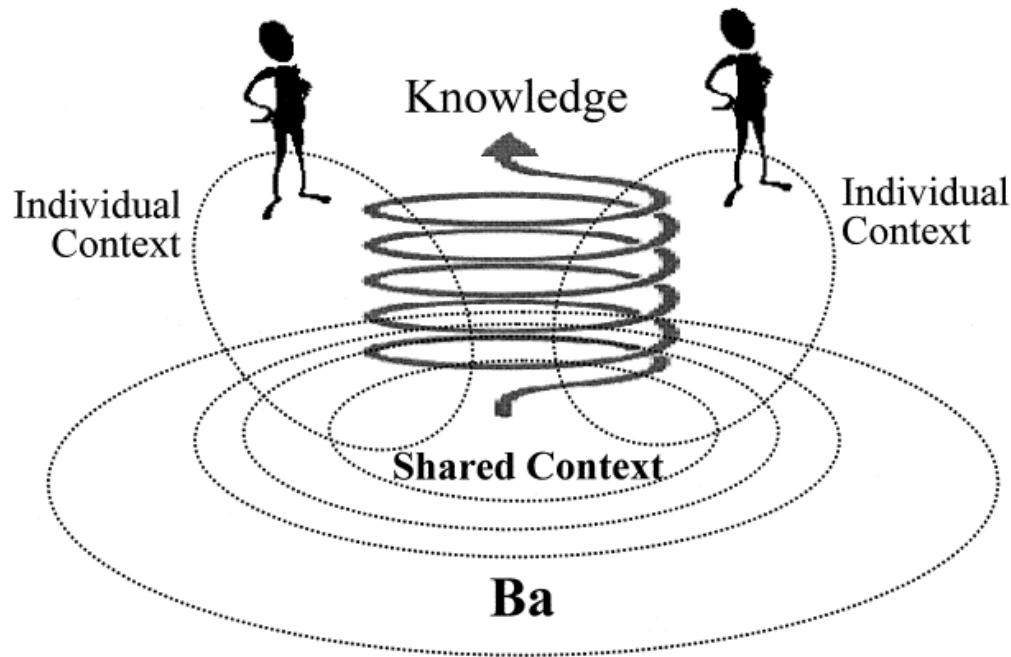




26th annual **INCOSE**
International Symposium

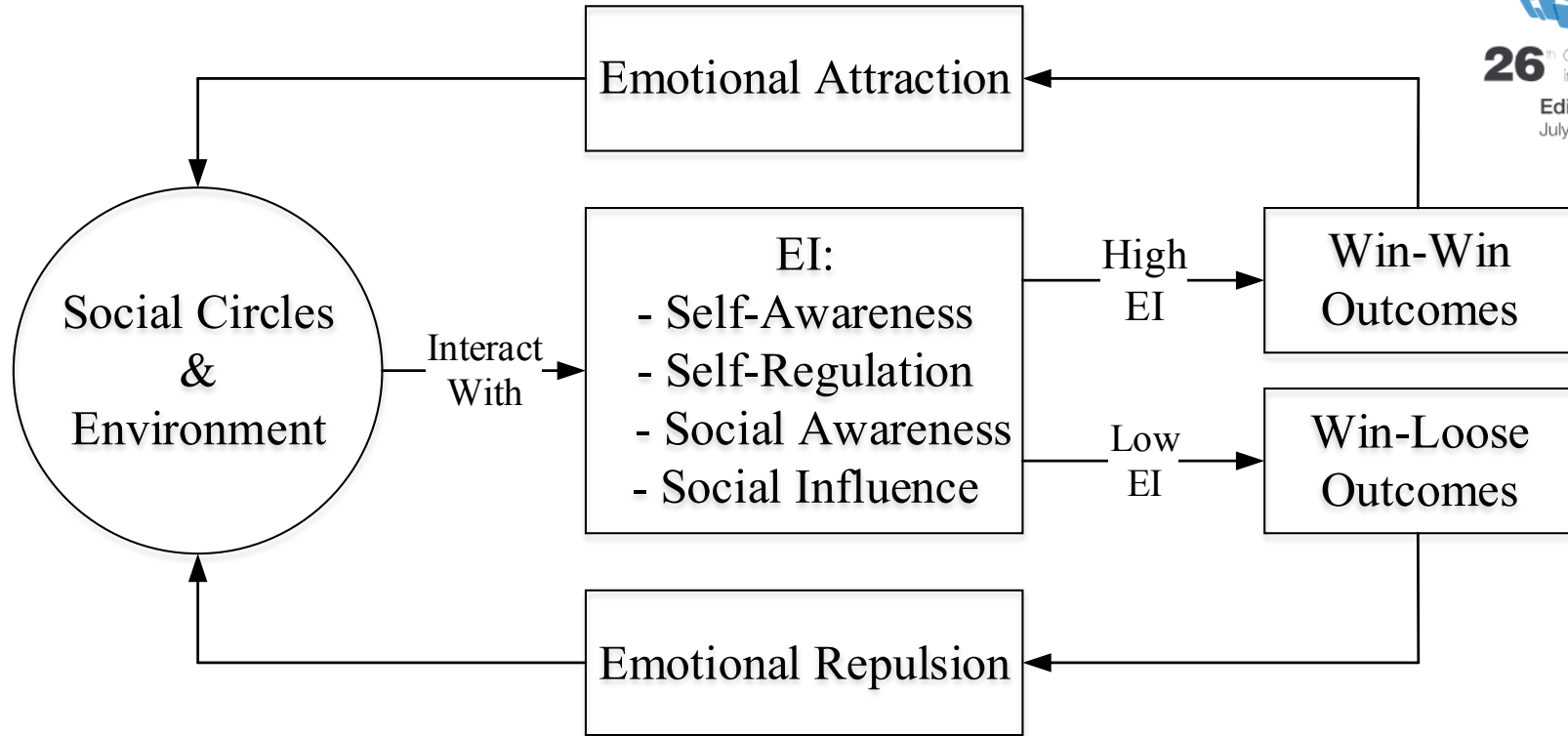
Edinburgh, UK
July 18 - 21, 2016

**‘Ba’ (場) is a Japanese word that means
‘shared context-in-motion’.**



Source: Nonaka et. al. 2000

Emotional Intelligence (EI)



EI and Social Interaction. Source (Kunananatt, 2004 p.490 & 2008 p.617)

Reflections



- Perceptions about technical-debt
- Non-technical obligations placed upon the teams that have technical consequences
- Co-location definition and sharing life experiences in a close physical proximity
- Standardising then stabilising practice across teams in the organisation

Conclusion



- Software systems craftsmanship is heavily relying on human-dynamics
- Current software engineering approaches pay inadequate attention to the human-element
- Current practice is trying to fit mechanical solutions to non-mechanical human-dynamics related issues will result in failure

Thank you!



To Be Continued...

2SAVE©

References



- Kunnanatt, J. T. 2004, "Emotional Intelligence: The New Science of Interpersonal Effectiveness", Human Resource Development Quarterly, Vol. 15, no. 4, pp. 489-495.
- Kunnanatt, J.T. 2008, "Emotional Intelligence: Theory and Description", Career Development International, Vol. 13, no. 7, pp. 614-629.
- Nonaka, I. 1991, "The Knowledge-Creating Company", Harvard Business Review, Vol. 69, no. 6, pp. 96.
- Nonaka, I., Toyama, R. & Konno, N. 2000, "SECI, Ba and Leadership: A Unified Model of Dynamic Knowledge Creation", Long Range Planning, Vol. 33, no. 1, pp. 5-34.
- Nonaka, I. & Takeuchi, H. 1995, The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation, First Edition, Oxford University Press, New York, USA.