ADI – Cohort 3

Weekly Discussion Group
Lessons 2.7 & 2.8
17th November 2020

Discussion items

1. Introductions
2. Weekly Discussion Group – objectives and governance
3. Course Structure
4. Lesson 2.7 Review & discussion – APIs & Microservices
5. News Item for the week
6. Lesson 2.8 Review & discussion - Tech Architecture best practices
7. Housekeeping & What happens next? Key dates and action items
8. Networking & Discusssions

Weekly discussion group – objectives and governance

Objectives

- Get to know each other a bit and share experiences
- Have some interesting discussions and expand our horizons
- Review lesson material and the questions posted in the community group
- Cover any housekeeping updates

Governance

- These discussions are private to ADI cohort 3 – not quotable “Chatham House” rules apply
- Please do ask questions at any time – either verbally or using the chat feature
- Decks for each session will be added here: https://www.the-digital-insurer.com/weekly-discussion-group-for-adi-cohort-3/
- Need to attend 2 per course as a minimum

ADI Programme – course lessons

OUR CHANGING WORLD ADI

1.1 The 4th Industrial Revolution
1.2 Our connected world
1.3 The power of social
1.4 Changing consumer behaviour
1.5 More change coming
1.6 Why data is King
1.7 Cloud crushes costs
1.8 Insurance Re-Booted

TECH ENABLERS ADI

2.1 Tech Trends in Insurance
2.2 AI, Machine Learning & RPA
2.3 Blockchain
2.4 IoT
2.5 Chat & Voice
2.6 Immersive Technologies
2.7 APIs & Microservices
2.8 Tech Architecture best practices

DATA & ANALYTICS ADI

3.1 The Power of Data
3.2 Python basics
3.3 Python intermediate
3.4 Data visualization & example tools
3.5 Machine learning (+ a little bit of deep learning)
3.6 D&A use cases in P&C
3.7 D&A use cases in Life & Health
3.8 Predictive Modelling

VALUE CHAIN INNOVATIONS ADI

4.1 Sales & Marketing
4.2 Underwriting – Life & Health
4.3 Underwriting – P&C
4.4 Product Development
4.5 Service & Administration
4.6 Claims – Life & Health
4.7 Claims – P&C
4.8 Implementing value chain innovations

NEW DIGITAL BUSINESS MODELS ADI

5.1 Platforms & Ecosystems
5.2 Microinsurance
5.3 On-demand
5.4 Comparison Sites
5.5 Peer-to-Peer & community
5.6 Health & Wellness
5.7 Commercial
5.8 Building new digital business models

MARKETING & CUSTOMER EXPERIENCE ADI

6.1 Data-led marketing
6.2 Direct digital marketing
6.3 Digital marketing for advisors (O2O)
6.4 Power of content
6.5 Omni sales & servicing
6.6 Customer lifetime value & customer advocacy
6.7 Customer Experience
6.8 Out-of-industry use cases

STRATEGY & TRANSFORMATION ADI

7.1 Why Strategy beats execution
7.2 Regulations & ethics in a digital world
7.3 Transforming the old vs building the new
7.4. Partnerships in a digital world
7.5 AGILE & LEAN basics
7.6 Change Management as a discipline
7.7 Cultural change for a digital world - Digital as DNA
7.8 How to succeed when most transformations fail

ADI ASSOCIATE DIGITAL INSURER

Course 2 – Tech Enablers

Context for this course

- Tech is changing at an exponential pace
- It is difficult even for technology professionals to keep up – let alone most of us
- Tech Enablers aims to explain some of the key technologies transforming insurance and provide some example use cases we are seeing in the industry

Lessons for Tech Enablers

2.1 Tech Trends in Insurance
Trends of technology impacting insurance

2.2 AI, Machine Learning and RPA
Turning data into actionable insights

2.3 Blockchain
From crypto to DLT in one hour

2.4 IoT
How IoT is helping to transform insurance

2.5 Chat & Voice
Latest technological developments and implications

2.6 Immersive Technologies
Early stage use cases and potential for Virtual & Augmented Reality

2.7 APIs & Microservices
The hidden tech helping insurance transform

2.8 Tech Architecture Best Practices
Exploring the tech stacks that are replacing legacy systems

Industry experts for Tech Enablers

TECH ENABLERS

ADI

Curriculum & Examination Design

Graham Spriggs

1. Tech Trends in Insurance

Hugh Terry

2. AI, Machine Learning & RPA

Hugh Terry

3. Blockchain

Simon Phipps

4. IoT

Andrew Dart

ADI Programme Director

Malini Nagaria

5. Chat & Voice

Frederik Bisbjerg

6. Immersive Technologies

Hugh Terry

7. APIs & Microservices

Hugh Terry

8. Tech Architecture best practices

Frederik Bisbjerg

Lesson 2.7 – APIs & Microservices

Reminder on Learning goals

Goal 1	Explain the basics of APIs and Microservices
Goal 2	Explain the use, and benefits, of APIs and Microservices in the insurance industry
Goal 3	Discuss and evaluate case studies that use APIs and Microservices within the insurance industry

Lesson led by:

2.7. APIs & Microservices

Hugh Terry

Content overview

Topic 1 –Basic Understanding

- What is an API?
- What is a microservice
- The API economy
- Microservices adoption

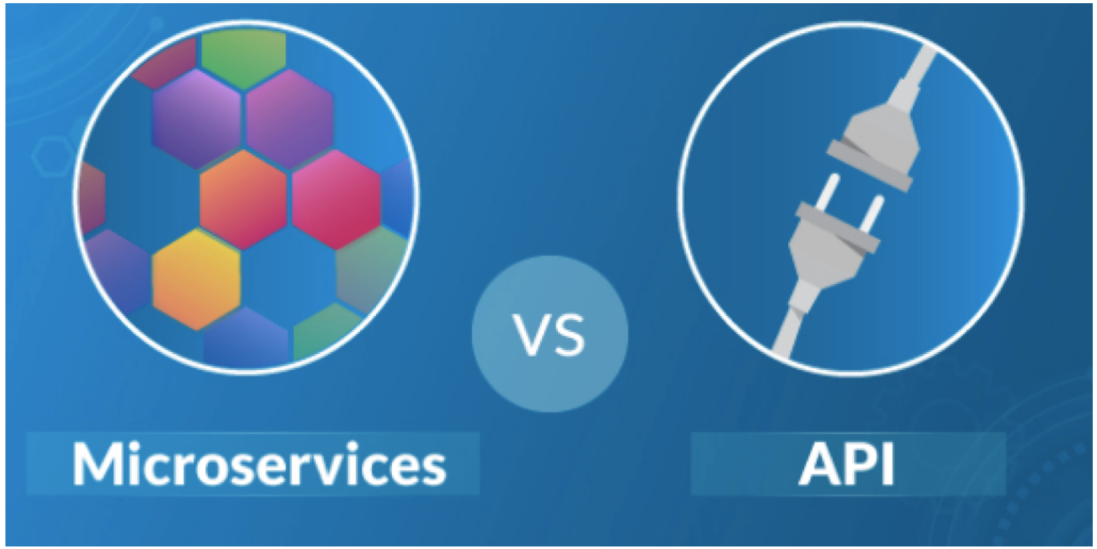
Topic 2 – Uses in insurance

- Hidden enablers
- General benefits
- Generic use cases

Topic 3 – Examples and case studies

- 7 examples and case studies

Microservices vs API



API Arguably a component in Microservice architecture – the connector

Source: Edureka Microservices vs API

APIs and Microservices are hidden enablers for digital insurance

- Exponential growth
- Crush cost
- Partnership enablers
- Agility

Source: [eBao Tech Bluffers Guide to microservices]

Benefits of APIs & Microservices to insurance

- Massive scalability at close to zero marginal cost
- Reduces cost of entering new market segments
- Access to externally built capability, data and relationships
- Shorten insurance product delivery timelines
- Decrease development costs
- Increase organizational agility
- Future-proof their technology

Insurers can focus and specialise – develop and own the APIs & microservices that make them special and a partner for the rest

Generic use cases

1. Deal with legacy

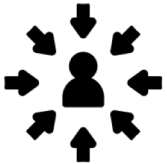
2. Enable partner strategies

3. Develop new products

4. Build new business models

5. Reorganise the value chain

6. Get closer to customers



Case study: Cover Genius

Cover Genius

Vision: protect all customers of the world's largest online companies.

End-to-end insurance & warranties. 1 API, 1 Global Partner.

https://www.covergenius.com/

What it offers?
- Digital microinsurance products
- South East Asia
- Started with Transit / Returns insurance

How is it different?
- One of the first to achieve global scale
- License in most countries & states
- Broad product range

Founding team
- Chris Bailey (Chief Innovation officer)
- Angus McDonald (CEO)

Tech deployed
- Cloud based
- API enabled
- Modern full stack platform
- Claims & UW specialism

Funding , revenue, client & scale
- Raised US$10 million in 2019 and further US$12 million in Q3 2020 - Series B
- 2019 revenue of US$240 million (GWP) and 2018 EBITDA of AUS$2 million,1 million policies sold

What to look out for
- Global expansion to continue
- Addition of product lines / API services

Further Info — CEO presentation Nov 2019 — Case study for online retailer

TDI Point of view

Established On demand digital microinsurance . Strong Tech platform and has developed strong distribution and insurance partnerships in a number of markets in South East Asia

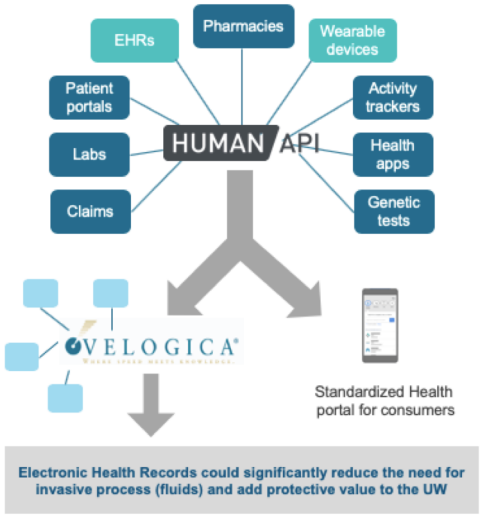
Case study: Human API

Human API

The API for sharing personal health data

"Powering the health consumer revolution"

https://www.humanapi.co/



"The easiest way for consumers to connect & share health data with any company

Potential data on 220m people across US. Network of 20,000 integrations covering 85% of hospitals

Access to Electronic health recorded could transform UW approach

Could help people become more health conscious and aware – in control

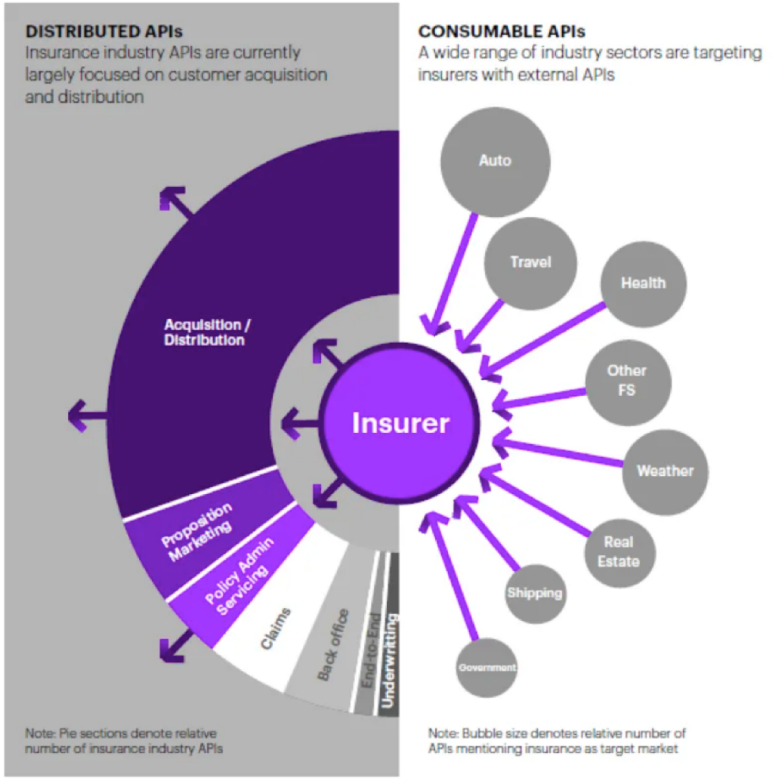
PR Newswire – Additional funding – SCOR and Guardian life
PR Newswire – update on integration with hospitals

With the user's explicit consent, Human API automatically retrieves digital health data (EHR, lab data, wearable data, etc.) structures, standardizes and aggregates it in a "health vault" for the user

Source: SCOR – iCLAM conference 2019

So what ? **APIs enabling a likely revolution in healthcare as well as life & health underwriting**

Open APIs in insurance



- Research firm Celent believes that insurers that fail to build APIs into their platforms won't be competitive in five years
- Open insurance initiative – Whitepaper discussing approaches and proposing standards

Sources: Open Insurance - Insurance platform ecosystems are an open playing field : Accenture – insurance success hinges on the right APIs

Lesson 2.7 – Poll Question

Q. Should Open APIs be mandatory for insurance companies?

Response Options:

1. Yes - with regulators setting short timelines
2. Yes - but allow 3-5 years for transition
3. No

Lesson 2.7 – Community Discussion Topics

Posted on the ADI Community Group

Q1. How far could API go in terms of allowing specialisation?

Q2. What are the most important APIs for insurance?

Q3. How can incumbents benefit from APIs ? What about new entrants?

Q4. Should Open APIs be mandatory for insurance as in banking in Europe?

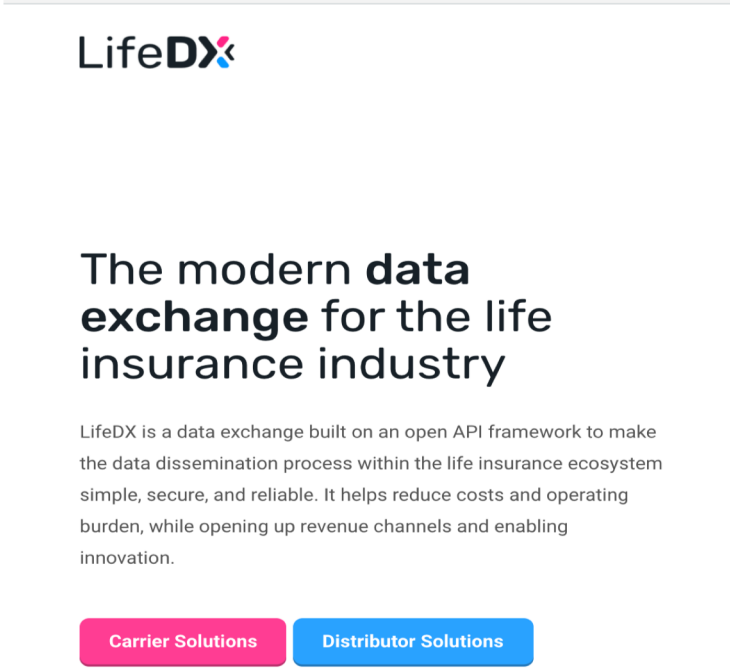
News Update: New LifeDX platform launches – API solution for quote & application for life insurance carriers

Nov 3rd 2020

LifeDX Platform Launches into Life Insurance Industry Through Collaboration with Pacific Life

LifeDX Uses Innovative Technology to Simplify Exchange of Real-time Data While Offering Customizable Experiences Without Drain on Development Resources

Leveraging APIs for quotes and application submissions streamlines integration between distributors, vendors, and carriers through a one-time build that can be re-used as connections are needed with other organizations. Going forward, as carriers make changes, distributors and vendors can avoid ongoing updates saving valuable development time. This can naturally reduce the effort for distributors or vendors to onboard additional carriers. It can also provide an opportunity for significant operational efficiency because there is only one source for securely accessing and transmitting information to and from these organizations.



https://www.prnewswire.com/news-releases/lifedx-platform-launches-into-life-insurance-industry-through-collaboration-with-pacific-life-301164954.html

https://thelifedx.com/#features-block_5f9a3d2ad3ada

Lesson 2.8 – Tech Architecture Best Practices

Reminder on Learning goals

Goal 1	Understand the basics elements of a tech architecture ecosystem
Goal 2	Understand how a tech architecture ecosystem should look to support the future of insurance
Goal 3	Apply the knowledge to map your current architecture and identify areas of improvement

Lesson led by:

2.8. Tech Architecture best practices

Frederik Bisbjerg

Content overview

Topic 1 – Overview

- Importance of Legacy and its implications
- Technical Debt

Topic 2 – Best Practice Principles

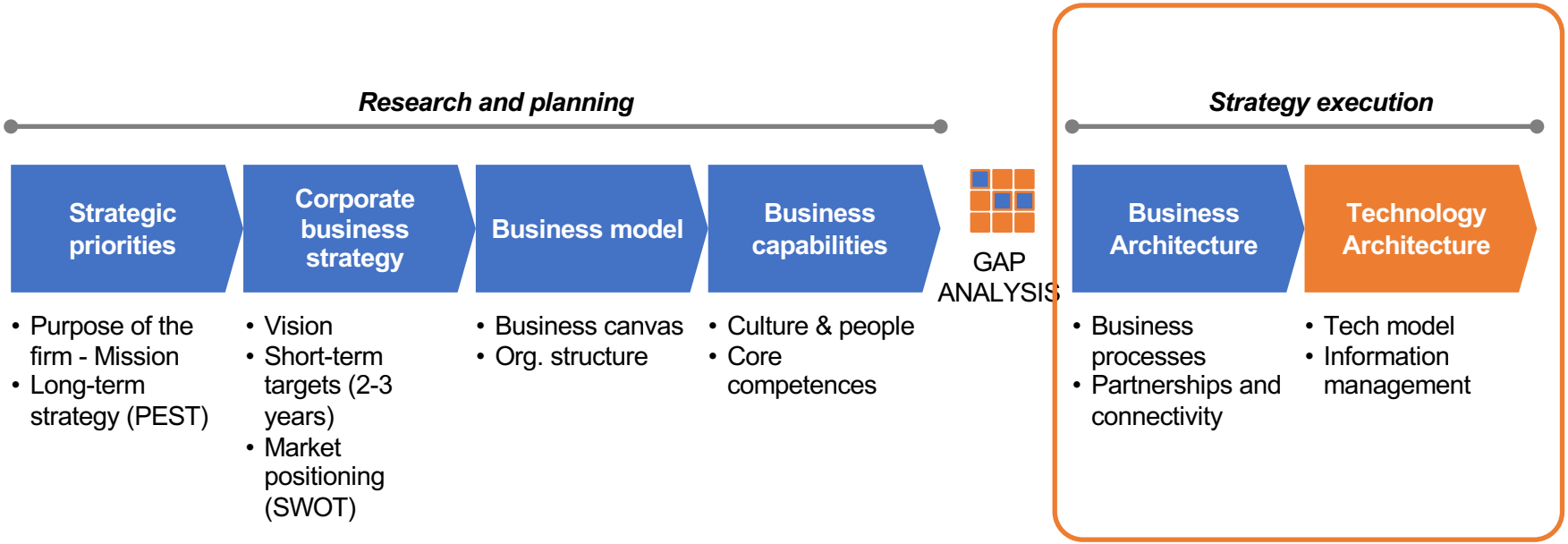
- Trends
- Bi-modal IT
- Bi-model case study
- Connecting – 3 tier API architecture
- Importance of data architecture

Topic 3 – Getting started from where you are

- TOGAF – the Open Architecture Group Framework
- Architecture Development Method

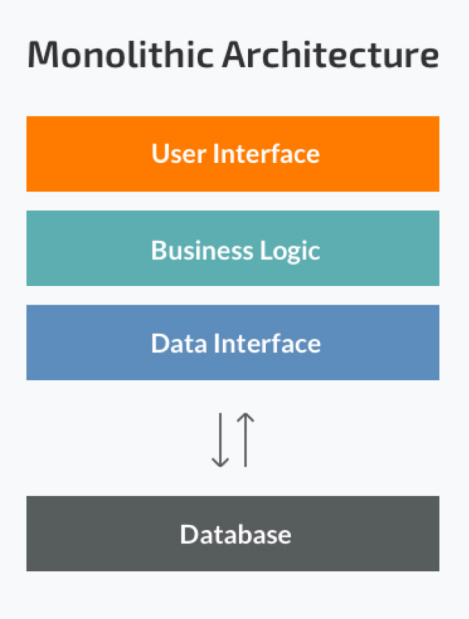
Tech Architecture is THE key component

Enterprise Architecture is a practice and collection of skills that are used to align technology strategy with business strategy



 Source: Own development

…but it comes with a heavy legacy



Issues with the monolithic architecture in the light of business development

- Rigidity / understanding cause and effect
- Complex code system
- Deployment of changes
- Difficult to scale – it is either no components or the whole application
- Hard to implement new technologies – requires rewriting the entire application
- Often slow to work with due to component structure and overall build

In software engineering, a monolithic application describes a single-tiered software application in which the user interface and data access code are combined into a single program from a single platform. A monolithic application is self-contained, and independent from other computing applications - Wikipedia

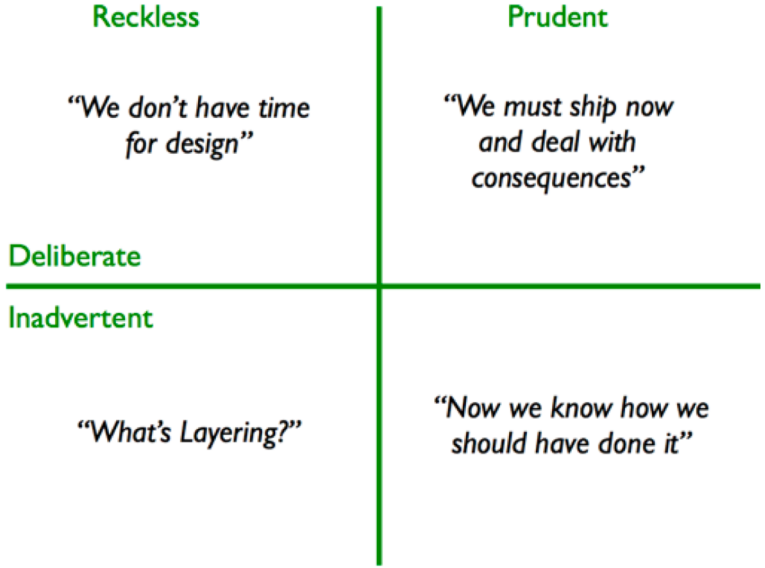
Source: N-iX: Microservices vs monolith which architecture is the best choice for your business

The Technical Debt Quadrant

- Be aware of when you build technical debt – make sure that if you do, it's deliberate and prudent…
- …and take actions to repay as soon as you can

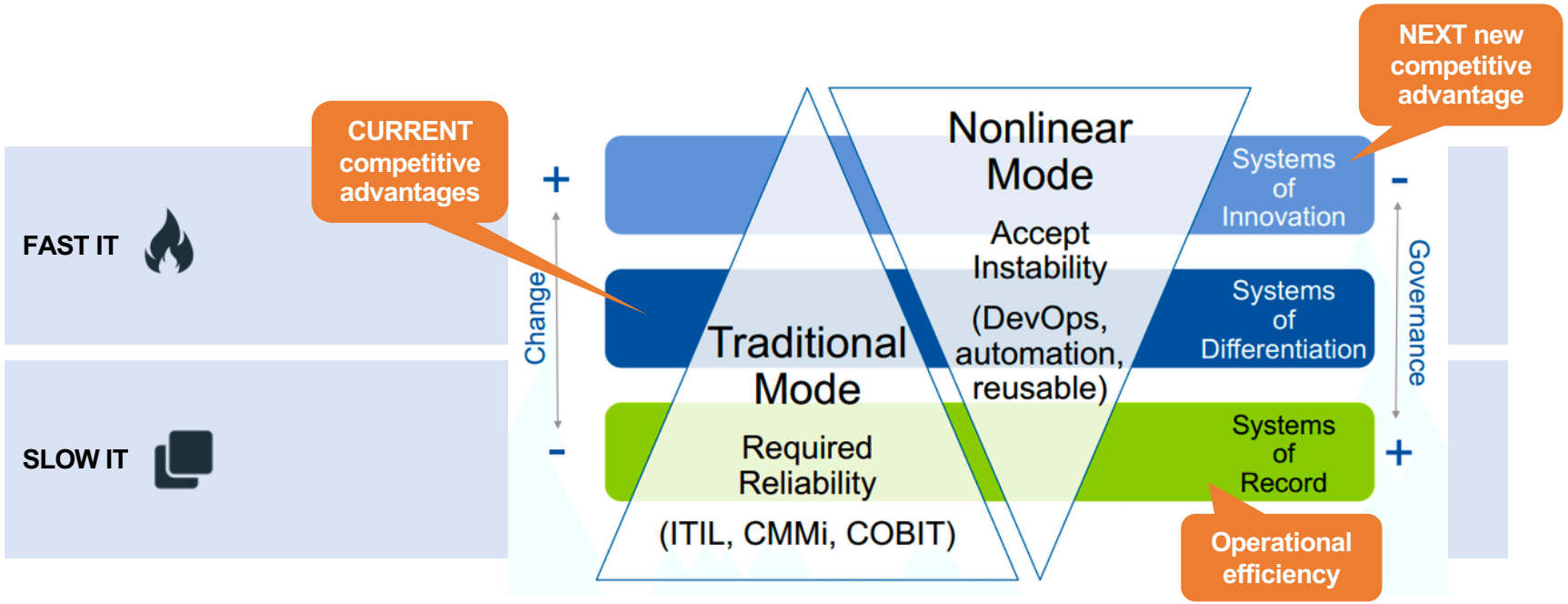
- Your current level of technical debt can be measured by the time required to make changes in your core systems

→ **The longer time, the more debt**



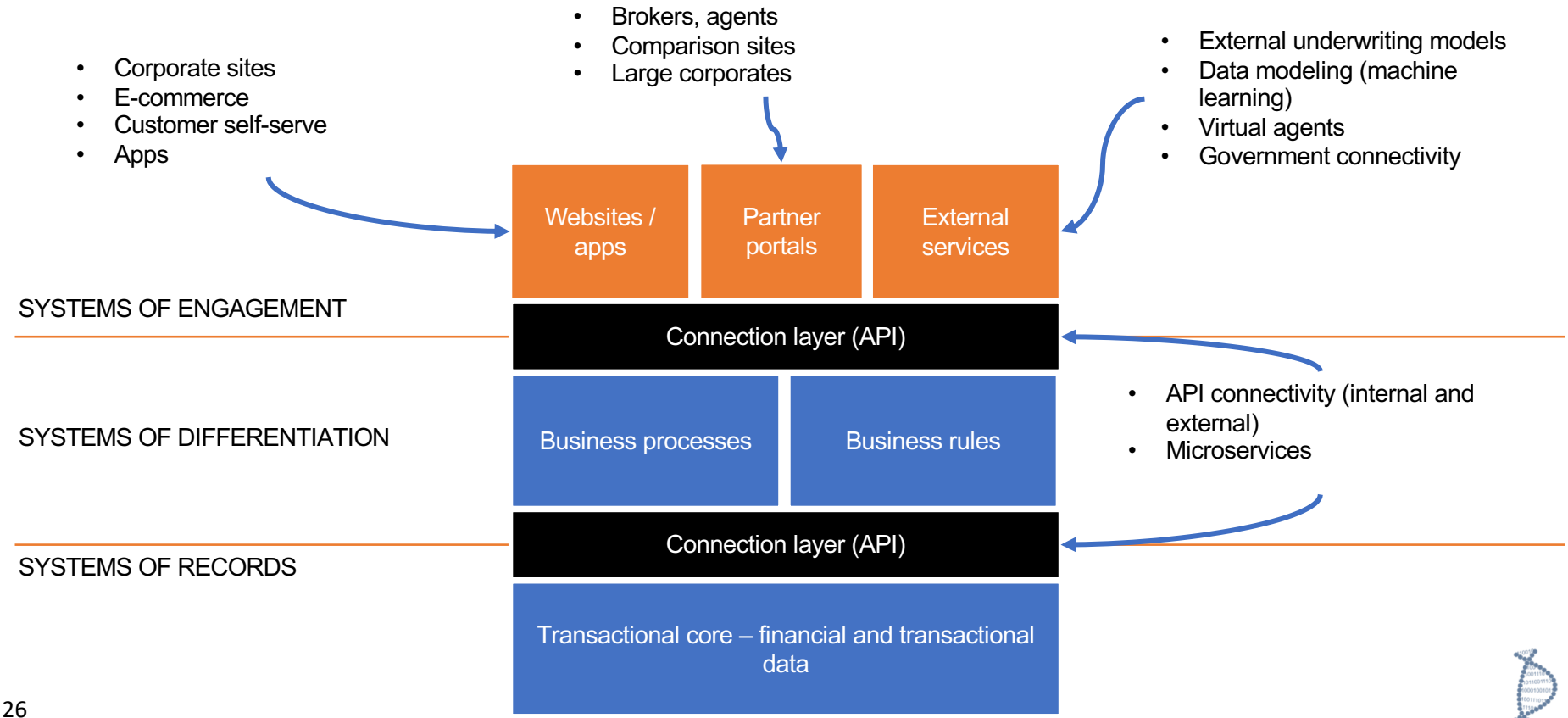
Source: MartinFowler.com: TechnicalDebtQuadrant

Core concept – bi-modal IT



Source: Gartner's pace layered architecture

High-level example from an insurer



Lesson 2.8 – Community Discussion Topics

Posted on the ADI Community Group

Q1. How bad is legacy tech for the industry? How quickly is it changing?

Q2. What are the implementation challenges? Is a big bang approach required or is it possible to move incrementally? Build or buy? Front end vs back-end?

Q3. How can the business best be engaged in Architecture design?

Vocational Assignment for Tech Enablers

- Complete a PowerPoint Deck to present **ONE** Case Study that demonstrates the practical application of a Tech Enabler in the insurance industry.
- Complete the business case template – minimum five slides – feel free to add slides
- Submission Deadline **in one week** – **24th November 2020**
- Before submitting, check: MCQs, Lesson and feedback completed, two Discussion Groups attended
- Filename: < Name – Course – Date submitted >: <*Graham Spriggs – TE – 24 November 2020*>
- Results sent within 21 days – If a Fail, resubmission within 30 days
- Reach out to Graham if you have any questions or concerns on the Assignment.

Housekeeping

1. **Are you on track?**
   - Lessons 2.7 and 2.8 completed for TE
   - Completed = videos all watched + MCQs passed + feedback completed + further references (as you see fit)
   - TE assignment almost done
   - If you are ahead of this, no problem; if you are behind – no problem but try to commit to three hours a week (covering two lessons)
2. **Week ahead targets**
   - Focus on finishing TE Assignment and completing course 2
   - Complete your Impact Journal for Tech Enablers
   - Download the Anaconda software required for lesson 3.2
   - Complete lessons 3.1 and 3.2
3. **Next weekly discussion group – 24th November @ 5pm HK/ SG time**
   - Review and discuss lessons 3.1 and 3.2
   - Introduce D&A assignment

Course 3 – Data & Analytics

Context for this course

- If Data is the new oil, then analytics is the Production Facility
- In this Course, we aim to bring the subject to life with some hands-on experience as well as industry use cases
- The Industry Experts for this programme include:
- Four lessons led by Xccelerate, a specialist in D&A training
- Two lessons led by a Swiss Re subject matter expert
- Two lessons led by Pat Saporito a published author and specialist in D&A for insurance

Lessons for Data & Analytics

3.1 Power of Data
Data trends and business value as well as management and governance of data

3.2 Python Basics
Get hands on with some basic coding

3.3 Python Intermediate
Explore structured data with Pandas and complete a basic model

3.4 Data Visualisation & Example Tools
Importance of visualisation tools and hands on session with Tableau

3.5 Machine Learning
Understand terminology and apply to use cases. Supervised and unsupervised learning algorithms

3.6 D&A for Property & Casualty
Focus on Property & Casualty use cases

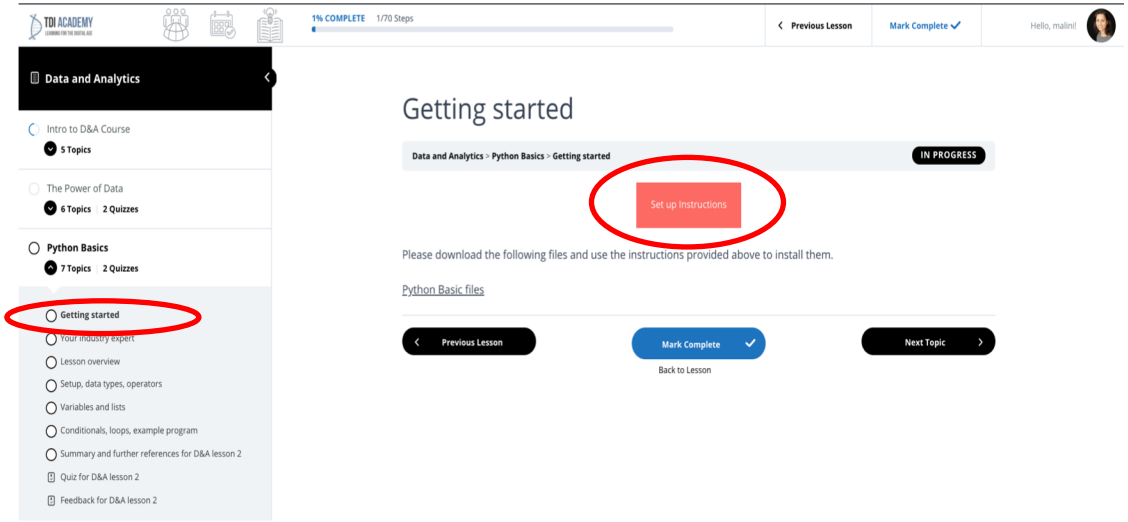
3.7 D&A for Life and Health
Focus on Life and health use cases

3.8 Predictive Modelling
Overview of predictive modelling including the basics, techniques and industry use cases

Introducing D&A - This course is different!

Key points

- 100% external Industry Experts
- Hands on!
- Set aside some time to have a go at coding
- Use desktop /laptop and you will need to download software – some companies may have firewall restrictions for software in which case we recommend to use a personal desktop / laptop instead
- Download and set up instructions can be found in the ‘set up’ topic of lesson



Set up instructions link:
https://www.the-digital-insurer.com/set-up-instructions-for-lessons-3-2-python-basics-3-3-python-intermediate-and-3-4-data-visualisation/

The TDI faculty for Data & Analytics

DATA AND ANALYTICS ADI

Curriculum & Examination Design

Graham Spriggs

1. Power of data

Patricia Saporito

2. Python basics

Jyoti Gupta

3. Python intermediate

Jyoti Gupta

4. Data visualization and example tools

Jyoti Gupta

ADI Programme Director

Malini Nagaria

5. Machine learning

Jyoti Gupta

6. D&A - use cases in property and casualty

Patricia Saporito

7. D&A- use cases in life and health

Yannick Even

8. Predictive modelling

Yannick Even

Key dates for November and December

Nov-20

- 3/11 - DG 2 (TE)
- 10/11 - DG 3 (TE)
- 17/11 – DG 4 (TE - 90 mins)
- 17/11 – Data & Analytics Course & Course Assignment released
- 24/11 – TE Assignment deadline
- 24/11 – DG 1 (D&A)

Dec-20

- 1/12 - DG 2 (D&A)
- 8/12 - DG 3 (D&A)
- 15/12 – DG 4 (D&A - 90 mins)
- 15/12 – Value Chain Innovations Course & Course Assignment released
- 22/12 – D&A Assignment deadline
- 22/12 – DG 1 (VCI)
- 29 / 12 – NO DG

Assignment deadline for TE:

24th November 2020

= Weekly Discussion Groups

= Course & Assignment release dates

= Assignment submission deadlines

= Complete

https://www.the-digital-insurer.com/topic/cohort-3-programme-schedule/

Upcoming events: TDI / FTAHK virtual meet up – 24th November

EVENT TYPE **VIRTUAL NETWORKING**

TDI / FTAHK Invitation-only Meetup

Date
Tuesday, 24th November, 2020

Time
12:30pm - 2:00pm HK

Location
Virtual Meetup

Organiser
The Digital Insurer

Virtual networking as it should be

Virtual networking event on 24th November @12.30-2.00pm HK time with TDI, HKFTA and KPMG

https://www.the-digital-insurer.com/event/tdi-ftahk-invitation-only-meetup/

Agenda
12:30 – 12:45 Networking
12:45 – 1:05 Presentations & updates
1:05 – 1:20 Networking
1.20 – 1:40 Presentations & updates
1:40 – 2:00 Networking & closing remarks

Speakers

Simon Phipps
Founder, The Digital Insurer

Lapman Lee
Co-Chair InsurTech of the FinTech Association of HK

Mark Wales
Co-founder, Galileo Platforms

Stephen Porteous
Managing Director, Innovation Programmes & Projects, Asia

Upcoming events: TDI / FTAHK virtual meet up – 3rd December

EVENT TYPE **VIRTUAL NETWORKING**

Singapore Private Virtual Networking Event with TDI & SFA

Date
Thursday 3rd December, 2020

Time
12:30pm - 2:00pm (SG)

Location
Virtual Meetup - Invite only

Organiser
The Digital Insurer & Singapore FinTech Association

Virtual networking event on 3rd December @12.30-2.00pm SG with TDI & SFA

https://www.the-digital-insurer.com/event/singapore-private-virtual-networking-event-with-tdi-sfa-2/

Agenda	
15 minutes	Networking
35 minutes	Panel discussion – Preview on Singapore FinTech Festival
10 minutes	InsurTech presentations and update on ITC Asia
5 minutes	TDI & SFA updates
30 minutes	Networking

Speakers

Subhajit Mandal
SFA InsurTech Sub committee member

Michael Cheng
SFA InsurTech Sub committee member

Hugh Terry
Founder, The Digital Insurer

Upcoming events: ADI Information Webinar – 24th November

TDI ACADEMY
Leading digital insurance L&D platform

ADI Information Webinar on Tuesday 24th November at 7-8pm SG / 12-1pm CET

ADI Information Webinar: We are enrolling for our January 2021 cohort – find out more at our information webinar on 24th November @ 7.00pm SG time – pls share with anyone who may be interested

ADI - the world's first 'mini-MBA' in digital insurance

Event Highlights

- The acceleration of digital transformation and what this means for insurers and yourself as an individual working in insurance
- How you and your company can benefit from going through a 'mini-MBA' Programme in digital insurance
- The ADI Programme explained – what it consists of, how it's run, assessment process
- Hear from an existing participant about their experience of ADI
- Q&A – ask any questions about the Programme
- Enrolment process

https://www.the-digital-insurer.com/event/adi-programme-information-webinar-mini-mba-on-digital-insurance-enrolling-now-for-2021-starting-january-27/

17th November DG – 30 mins

- Final 30 mins – informal networking in small groups
  - We will split you into small groups using Zoom breakouts
  - Opportunity to get to know your fellow participants & discuss the Course
- **First 15 – 20 mins** – discuss the following in your groups
  1. Your top 3 learnings from the TE Course
  2. Share any interesting TE use cases that others may not have heard of
- **Final 10 - 15 mins** – come back as whole group and share your insights

Open Forum - Need clarification or more info?

Access problems?

Usability problems?

General questions?

We are here to help

- General questions/queries - please email us at adi@the-digital-insurer.com
- General concerns or queries please email Malini, the Programme Director: malini.nagaria@the-digital-insurer.com
- For curriculum and/or assignment queries, please email Graham, Curriculum Director: graham.spriggs@the-digital-insurer.com