



The philosophy of complications

during percutaneous
cardiovascular
interventions

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Outline

- **The basics**
- The trainee
- The teacher
- The tools

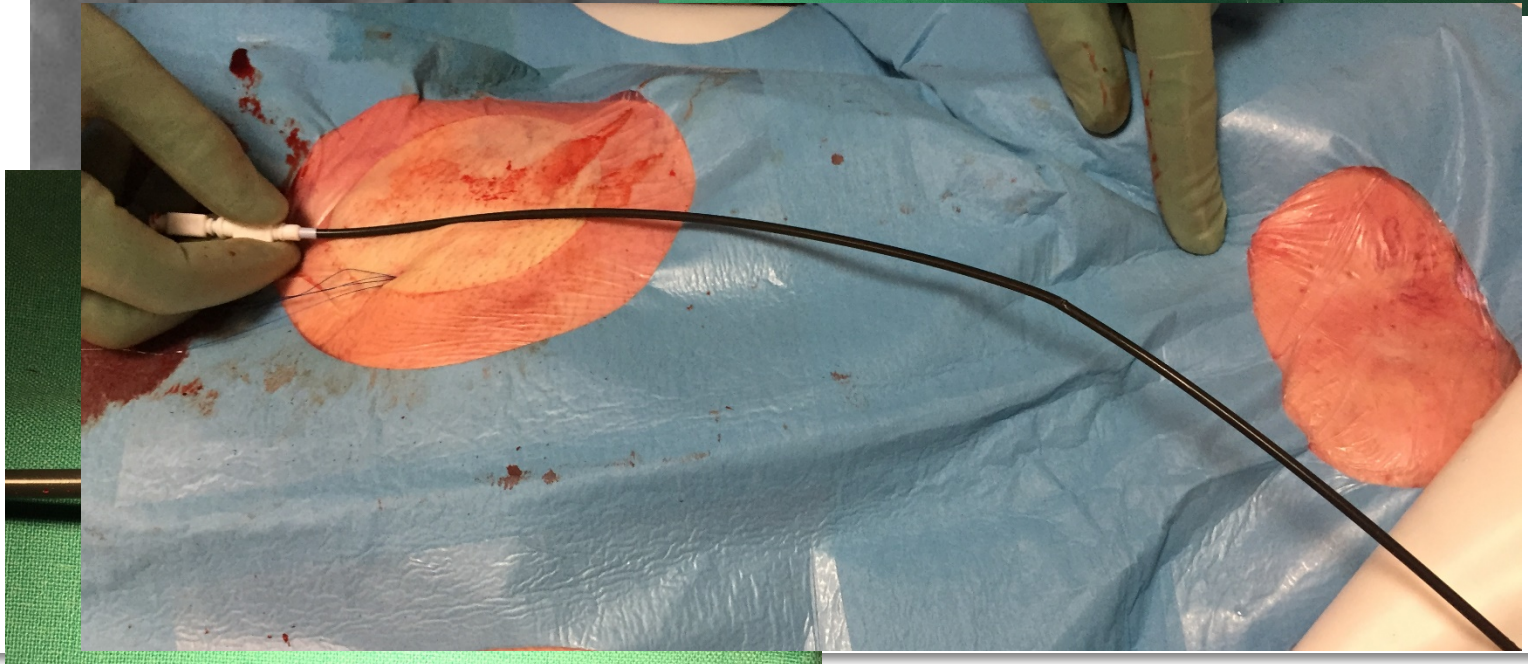
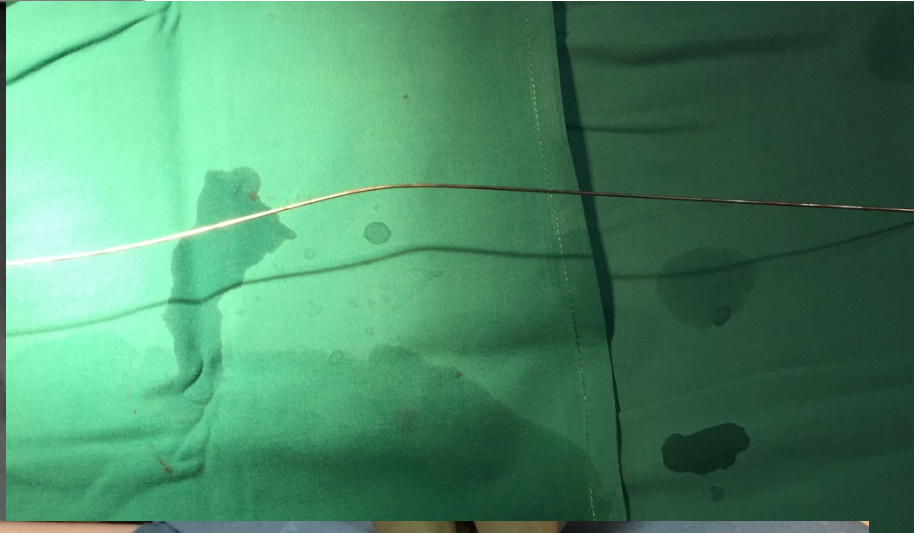
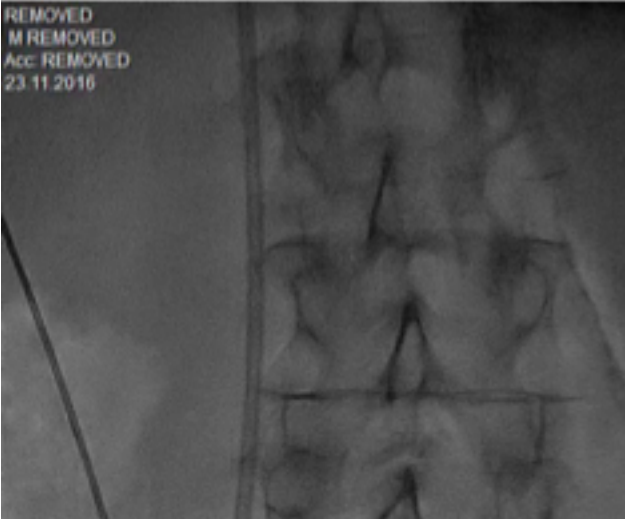
Rich emotion experiences

- Underreported
- Variable perception
- "Scientific gap"
- Lack of adequate auditing - jungle of practice



Innova

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Human error

- Unability to cope with unexpected procedural events
- Loss of the global picture
- Non – compliance with protocols
- Suboptimal communication within the team
- Stress – lack of experience – loss of concentration – inadequate actions and strategic errors
- **Individual or team failure**

RECONSTITUTION

3

PIECES
A CONVICTION

VOL AF 447 RIO/PARIS : LES RAISONS D'UN CRASH

Device or technology failure

- Uncommon in interventional practice
- Non – compliance with IFU
- Lack of training & expertise
- Can often only be solved by human imagination & creativity

=> Mechanism abused by practitioners...

Medical - system error

- Sleep deprivation
- Inter - operator competition
- Upfront lack of concentration
- Insufficient knowledge of the patient records
- Step out of “one’s boundaries”

=> Medical error - nonchalance

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The trainee

- Need for **true grit**
- Identify your local mentor
- A certain degree of dexterity
- Make &/or imagine a career plan
- Identify a particular field of interest (skills, research)

Key elements

- Powertraining
practice...practice...practice...practice...practice...
- Go abroad
- **At risk : cope with multitasking**

Outline

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The teacher should be...

- Humble
- Open-minded (a person of this world... And of his word)
- Willing to share and teach
- A hands-on person (not a flying doctor...)
- Have a broad vision & knowledge
- Able to assure continuity in medical care (when on leave...and on his definitely leave)
- (Have been) a victim of a substantial number of complications in the past
- **At risk : nonchalange**



Outline

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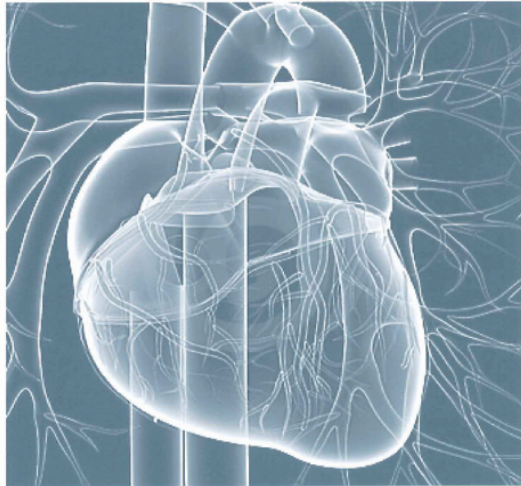
The tools

- The mentor – teacher - gourou
- Textbooks
- Basics & powertraining at home
- Fellowship
- Web-based teaching
- Simulators
- Learning by sharing
(courses, congresses, networking)



PERCUTANEOUS INTERVENTIONAL CARDIOVASCULAR MEDICINE

THE PCR-EAPCI TEXTBOOK



EDITORS

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MARC VAN SAMBEEK



www.escardio.org/EAPCI

The essentials

- The PCR – EAPCI reference text book and on line platform
 - **Core medical knowledge for the interventionalist**
- Comprehensive
 - Coronary – structural – valvular - vascular
- Innovative
 - On line (App – Ipad)
 - Extremely illustrative

Homework & then...



The PCR online learning program on complication management”

Olivier Muller

Lausanne University Hospital



PCR online learning program

MY PCR LOGIN CREATE ACCOUNT [SEARCH](#) [CALENDAR](#)

PCR online TOPICS COURSES **CASES & RESOURCES** NEWS PUBLICATIONS ABOUT PCR

RESOURCES
Course videos & slides
Educational interviews
Abstract Books
PCR Webinars on demand
Best of selection

CASES
EuroIntervention: How should I treat
LIVE cases
Learning cases
Read & Share cases

TAVI ATLAS
Anatomy
Imaging
The Heart team
Procedural concepts
Devices
Valve-in-valve
Publications

COMPLICATIONS
Coronary perforations
Coronary implant loss
Coronary stent loss

IMAGES IN CARDIOLOGY
Images from EuroPCR 2018
Images from EuroPCR 2017
Images from EuroPCR 2016
EuroIntervention: image in cardiology

INDUSTRY PARTNER PERSPECTIVES
Promoted content

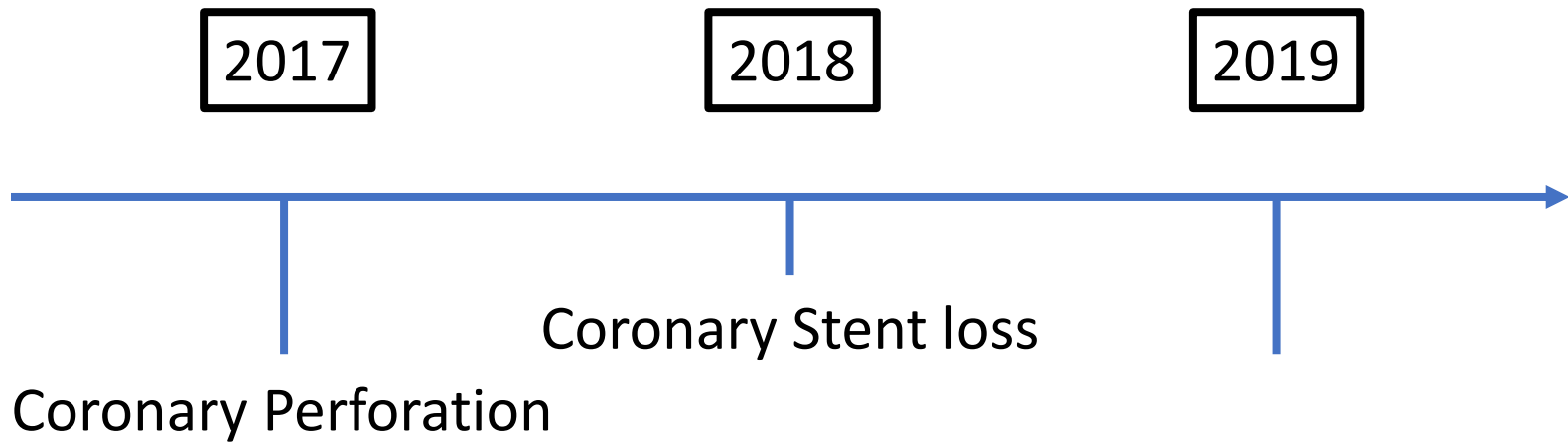
euro PCR

Learn from your peers how they overcome these difficulties. [READ MORE](#)

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PCRonline complications

Schedule



Coronary Stent Loss

MY PCR WELCOME OLIVIER MULLER SEARCH CALENDAR

PCR online TOPICS COURSES CASES & RESOURCES NEWS PUBLICATIONS ABOUT PCR

CORONARY STENT LOSS

PARTIAL STENT LOSS TOTAL STENT LOSS **STENT IN AORTA/PERIPHERAL ARTERIES** ADDITIONAL LINKS

PCRonline / Cases & Resources / Complications / Embolised devices

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Complications: coronary stent loss

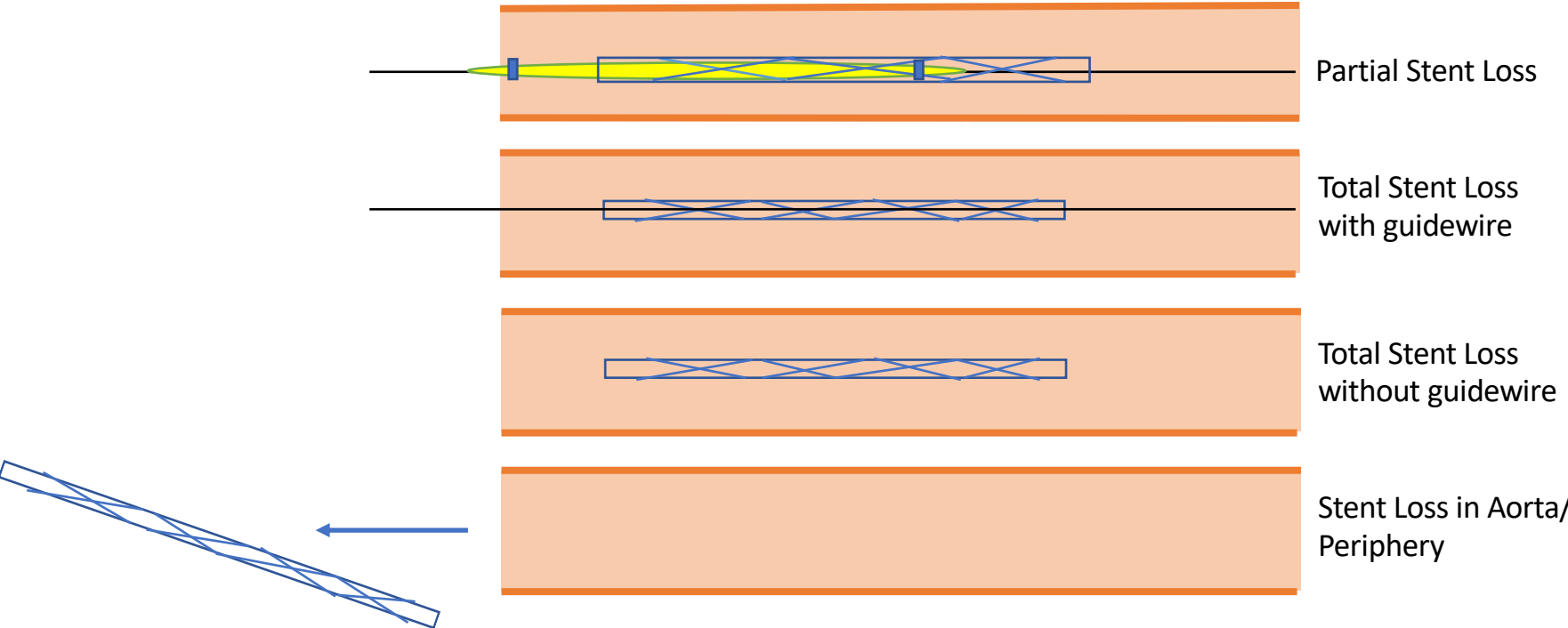
Embolised device complications

Stent loss and embolisation although infrequent (<1% of PCI) since factory crimping was introduced has not been eliminated entirely. Retrieval techniques are technically challenging and evidence for their success is limited to case reports and case series from experienced operators. The key principle for retrieval is to bring the foreign body down into the iliac artery as this removes the risk of embolisation to the cerebrovascular system and or thrombosis in a coronary artery.

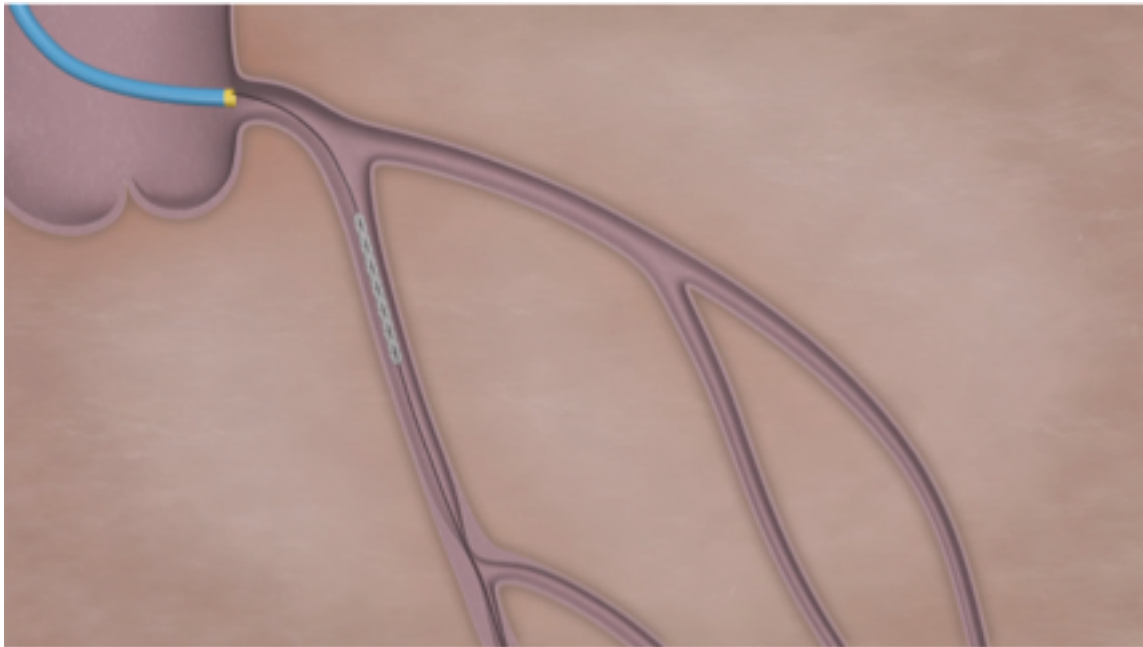
The position of the guidewire will be crucial in the choice of the technique. Indeed, some techniques, are not possible in the case of inadvertent removal of the guidewire. Thus, taking great care to keep the wire position inside the stent and across the lesion is of major importance. For stent loss within the coronary circulation the key principle for successful retrieval is to keep the guidewire position secure at all times.

PCR Complications Team: [Patrick Calvert](#), [Eric Eeckhout](#), [Michael Haude](#) and [Olivier Muller](#)
Medical assistant: [Timothy See Wah Lal](#)

Coronary Stent Loss



Learning by watching



PCR and Terumo Learning EDGE™

Physical simulation-based learning



Lauder L, Eurointervention, in process

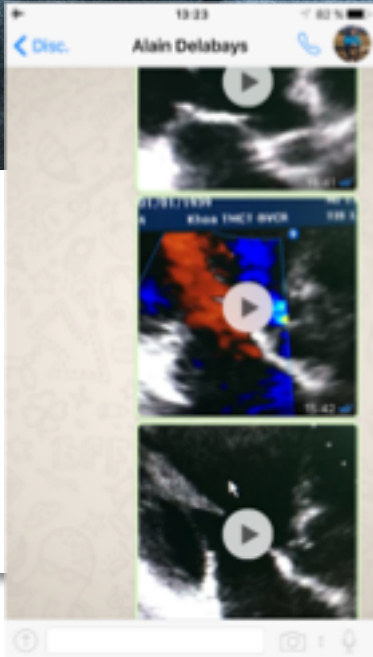
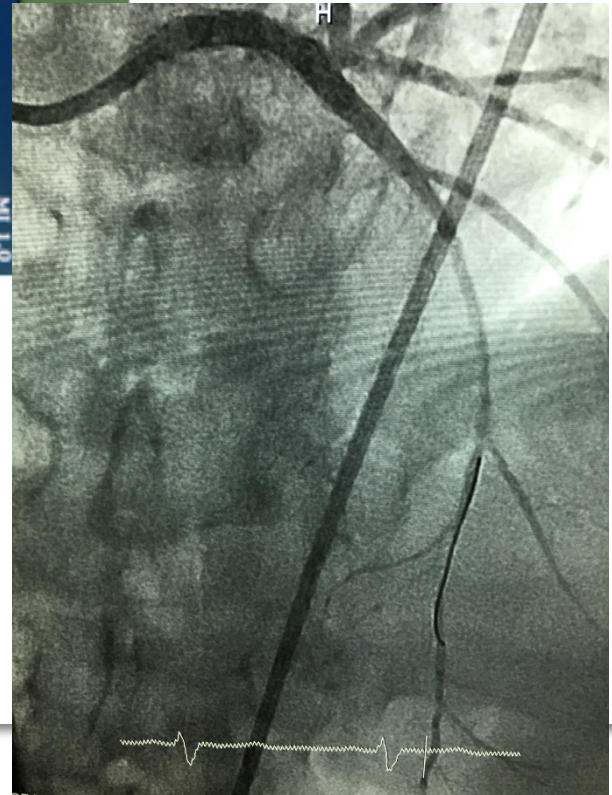
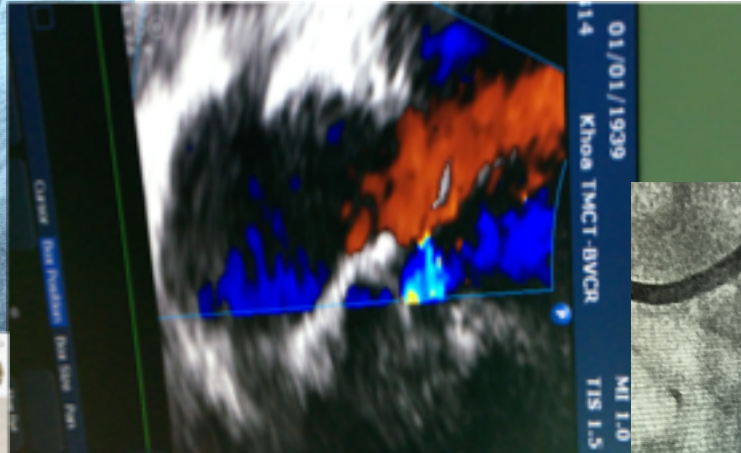
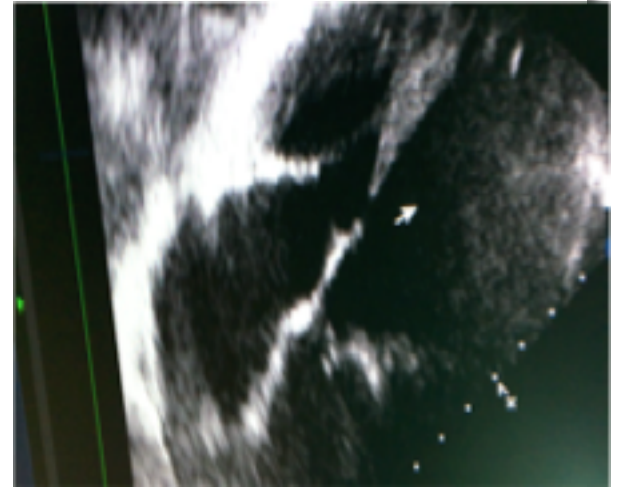
Learning by sharing

- Congresses – courses
- Networking
- Case based sessions
- Social media
- Individual contacts
- Morbidity – mortality meetings
- Team debriefings after each major complication
- Learn from your own/others mistakes

What have we learned ?

- To meet a lot of people
- Learning through sharing, for better and for worse
- To uphold the core values of modesty, honesty & mutual respect
- Trigger human creativity in complications management
- **To organise complications meetings**

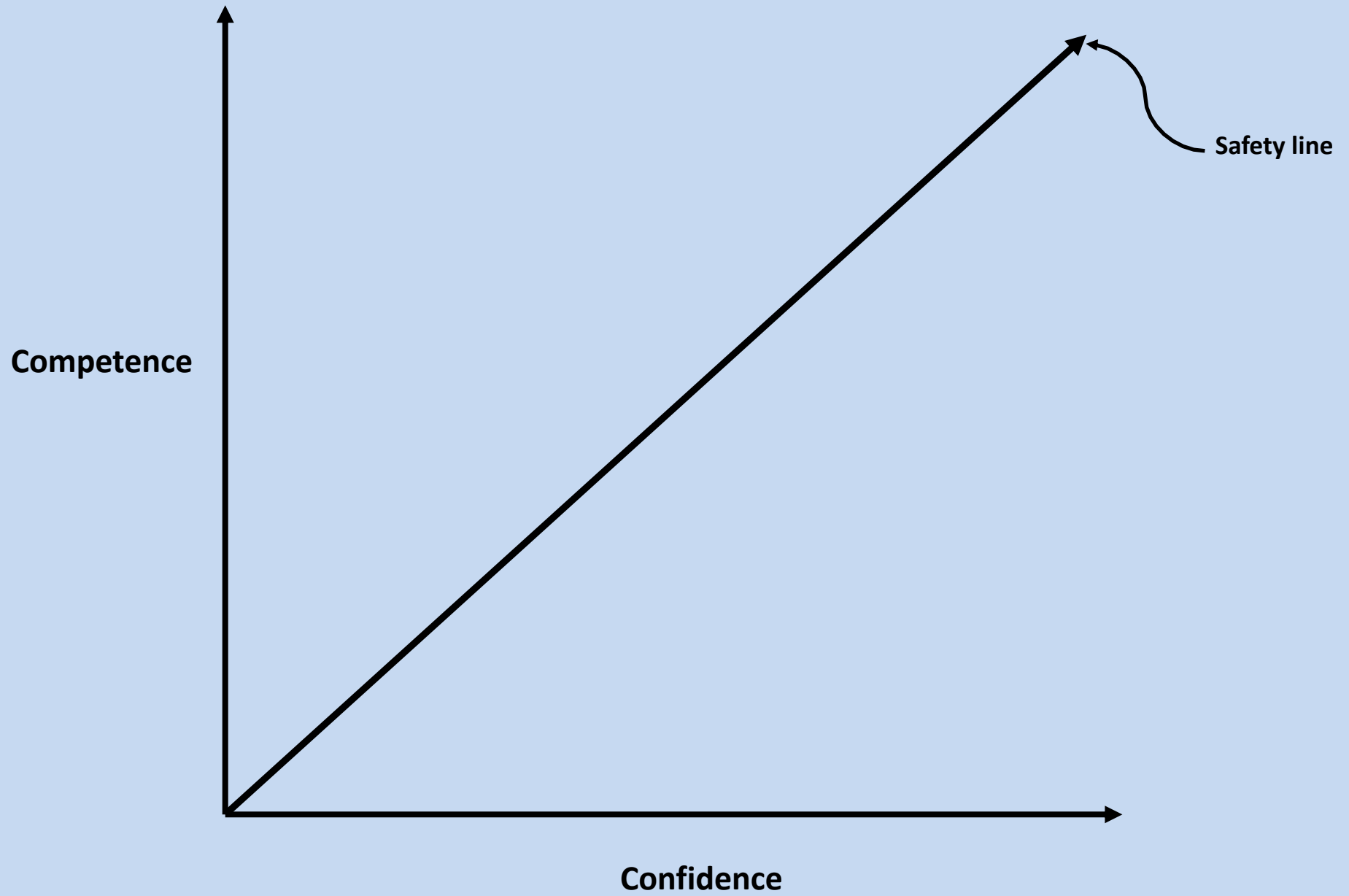
Far east Asia – December 2015



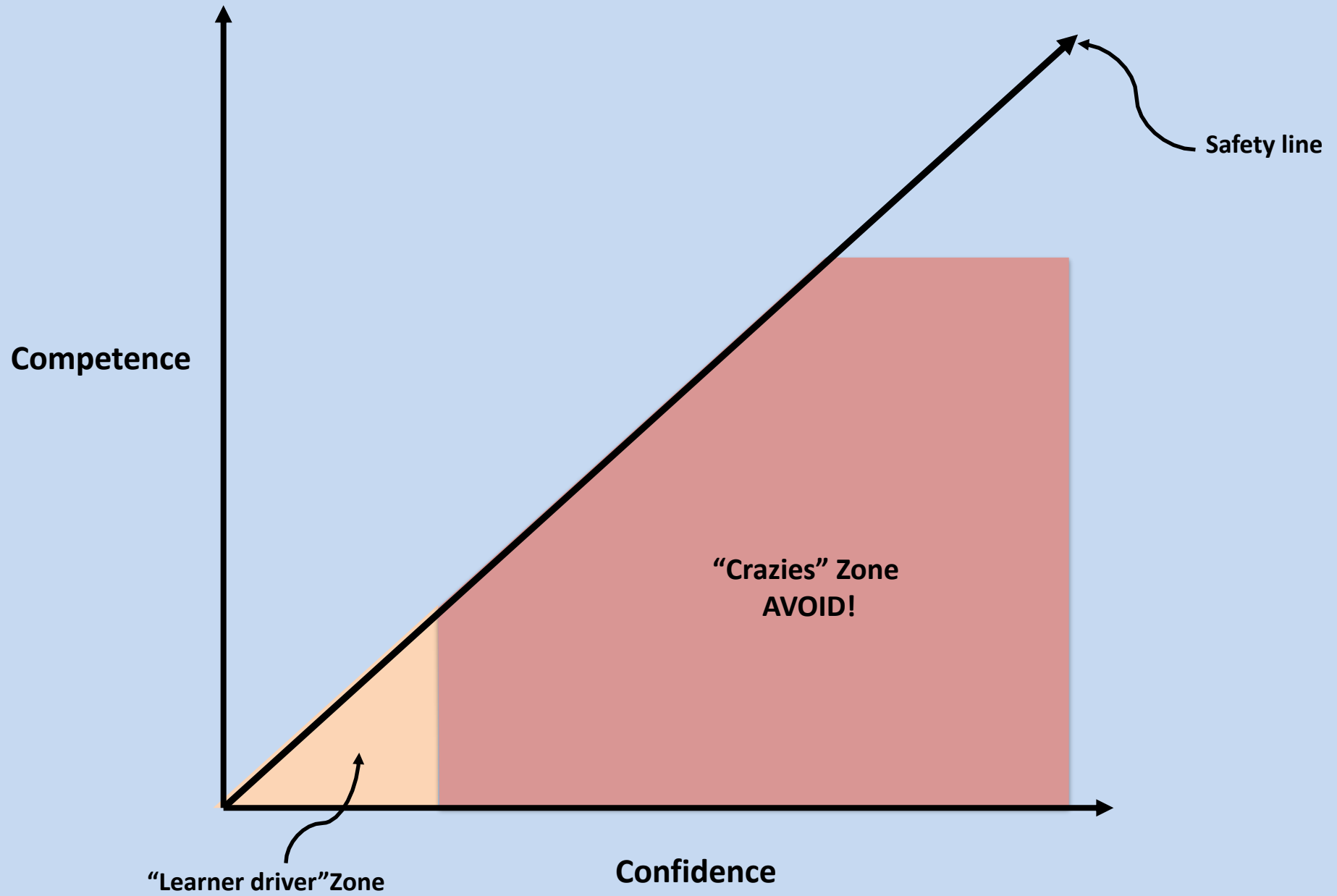


Competence

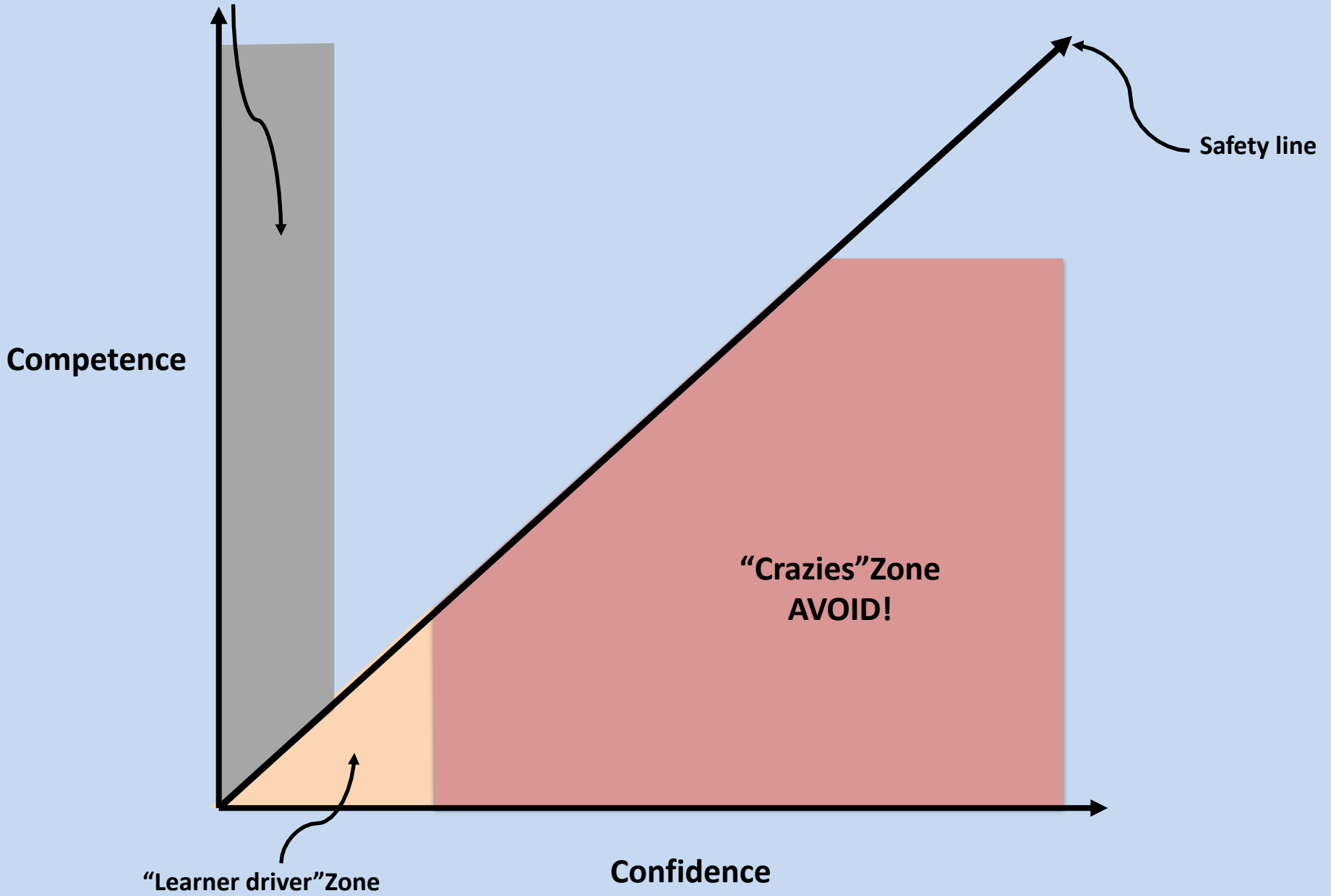
Confidence



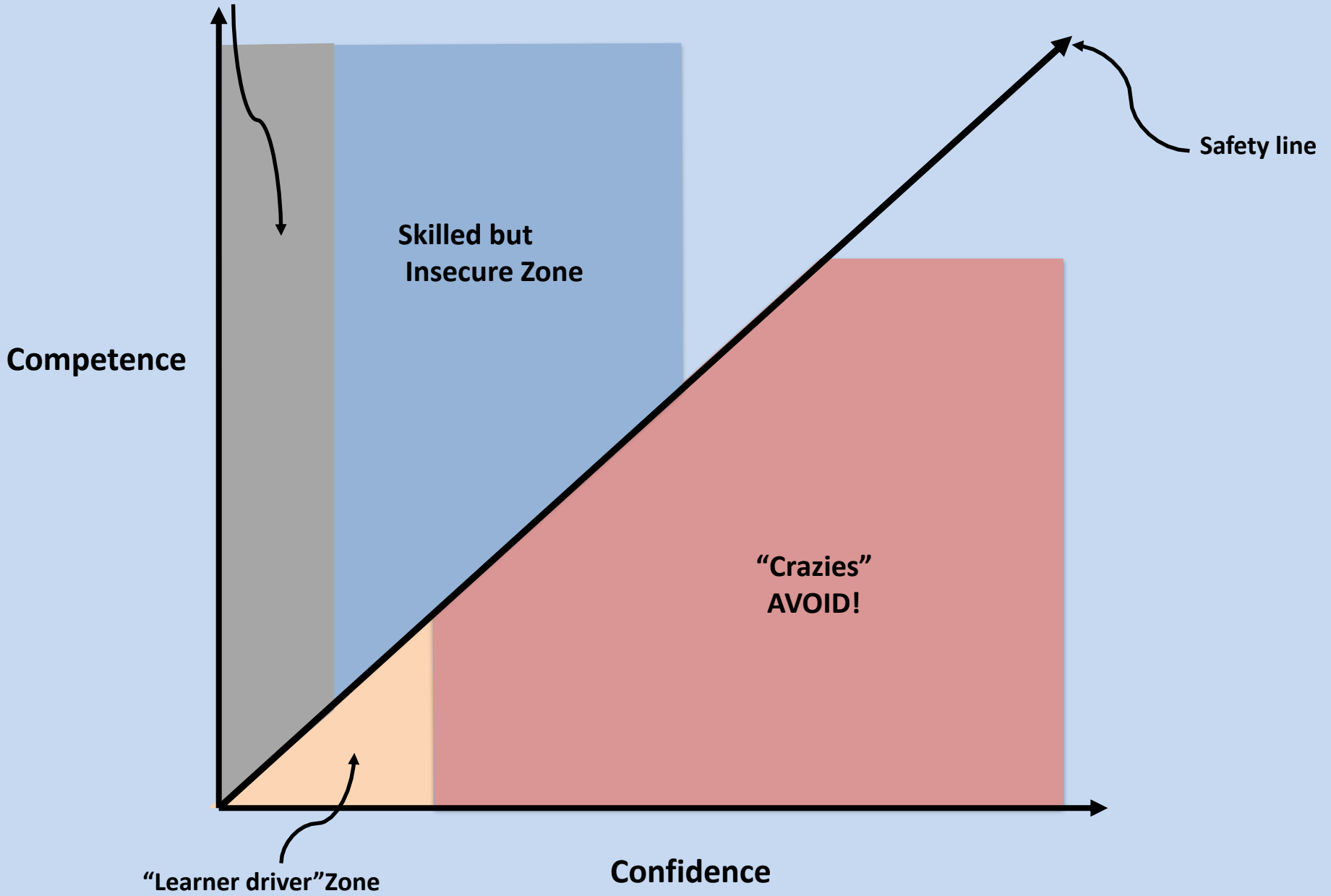




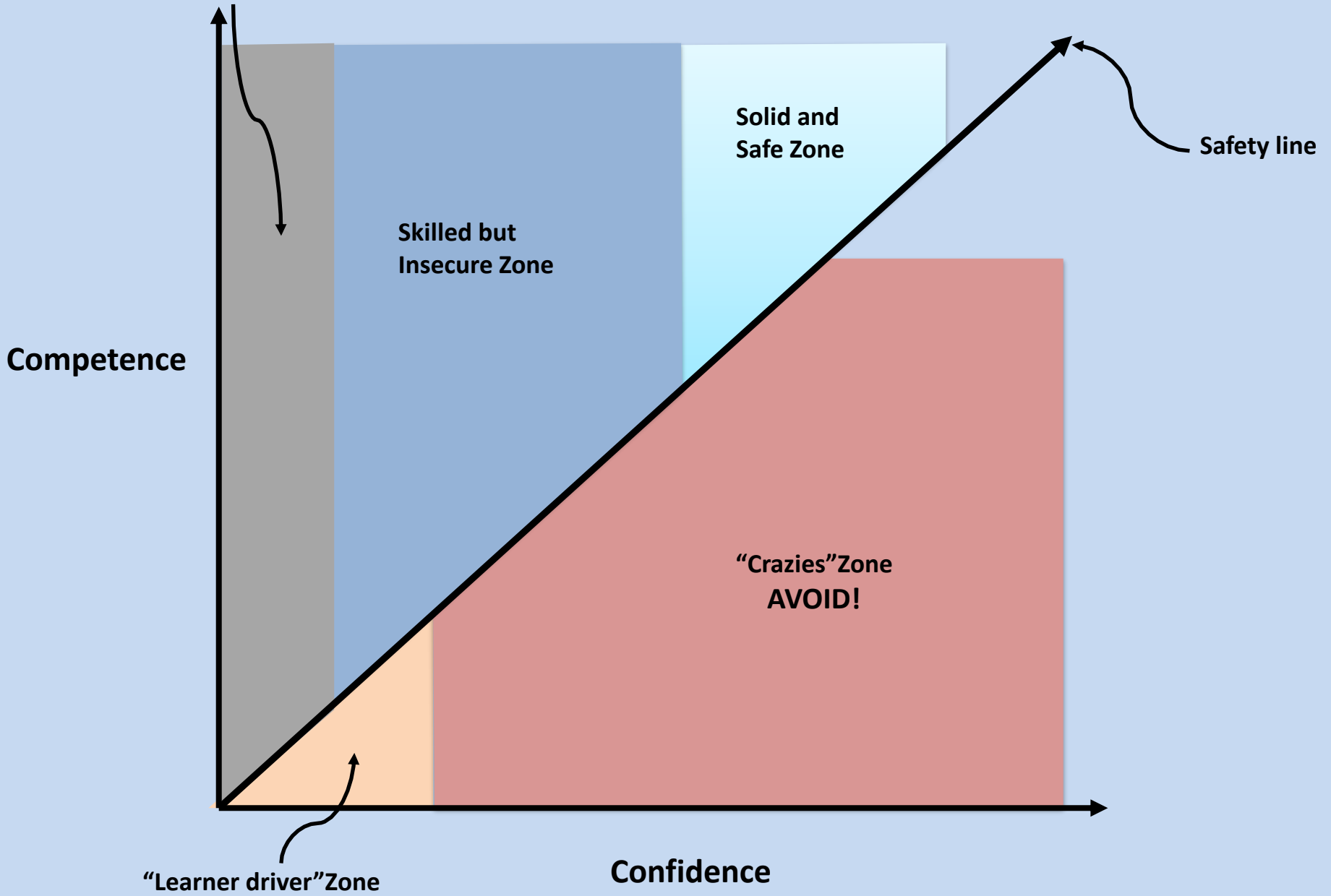
Skilled but paralysed with fear Zone



Skilled but paralysed with fear Zone



Skilled but paralysed with fear Zone



Competence

Solid and Safe Zone

Skilled but Insecure Zone

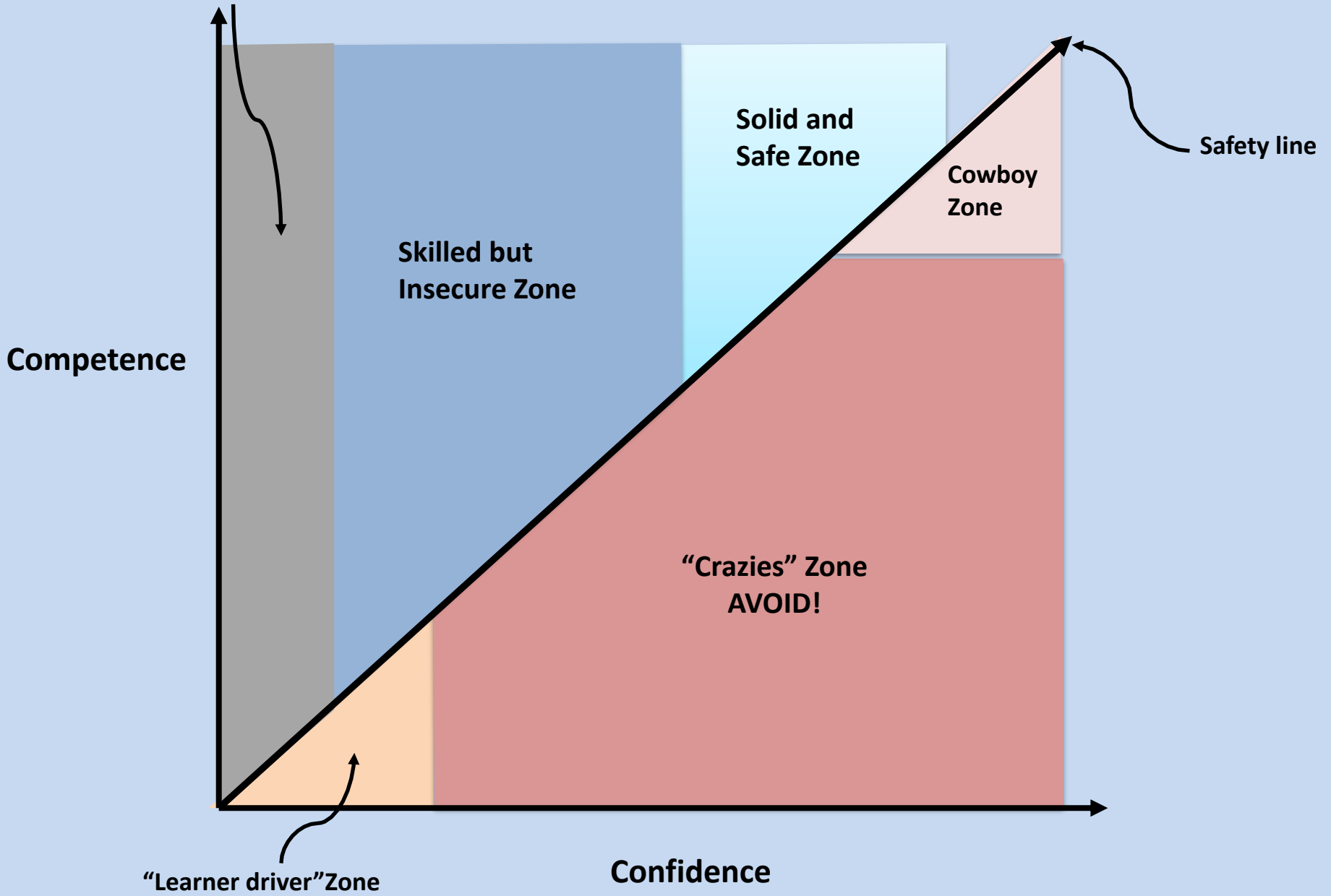
Safety line

"Crazies" Zone AVOID!

"Learner driver" Zone

Confidence

Skilled but paralysed with fear Zone



Competence

'Learner driver' Zone

Confidence

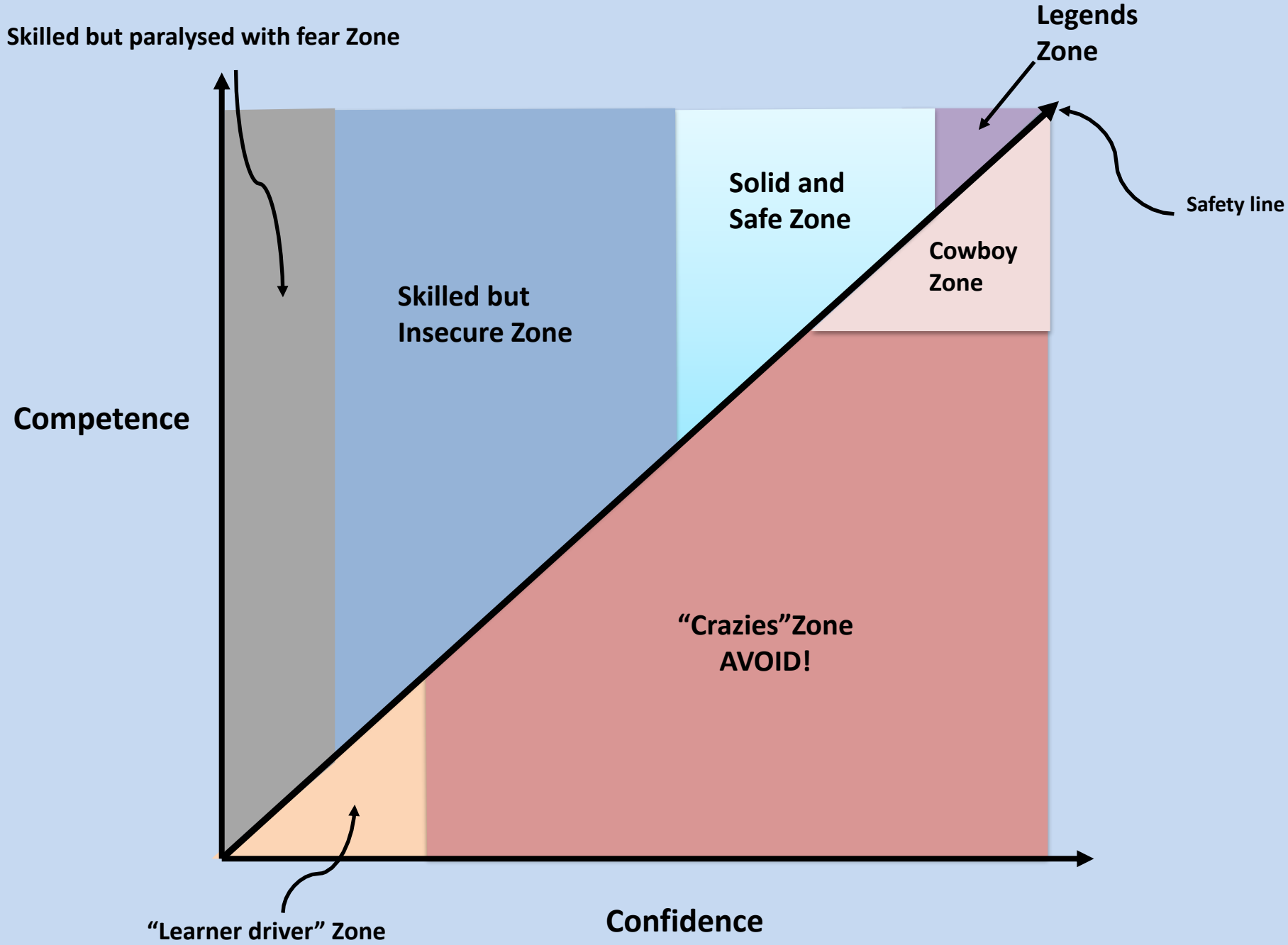
Skilled but Insecure Zone

Solid and Safe Zone

Cowboy Zone

'Crazies' Zone AVOID!

Safety line



James Ensor – The Bad Doctors
BOZAR, Bruxelles - 1892

