Value
Engineering
Services

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Safe Motorcycling
A Biker's Perspective

The Bike

Motorcycle Types

Dirt Bike 50-650cc

High ground clearance, not road ready

Sport Touring 1100-1800cc
450-650lb, High performance

Standard 650-1800cc,

700-1200lb, High power

Super Sport 650-1100cc

290-350lb, High performance

Intro Bike 125-500cc,

200-500lb

Sport Unclad 650-1100cc

290-350lb, High performance

Scooters 50-650cc

Critical Days of Summer 2008
Naval Safety Center

The Biker

The author is a seasoned motorcycling enthusiast for the past 35years having owned a series of motorcycles….from the humble DT100 scrambler and growing into the powerhouse of a Honda CBR100F.

Being a warranted engineer specialised in the automotive industry also led to the author undertaking most of the maintenance requirements and structured a Preventive Maintenance program for 4 stroke engines.

The contributions in this presentation are the sole opinions of the author and are based on over 500,000 kms over 35 years clicked interacting with the motorcycling, world both locally and abroad.

Motorcycle Use

The reasons for choosing a motorcycle are distinct.
Let's set the base line for objective use from the riders perspective and assign a projected percentage to each sector relative to the number of motorcyclists, .

1. **The Commuter – 70%**
   - Beat the traffic - get to destination on time
   - Cost – Cheaper to run & maintain
   - Parking

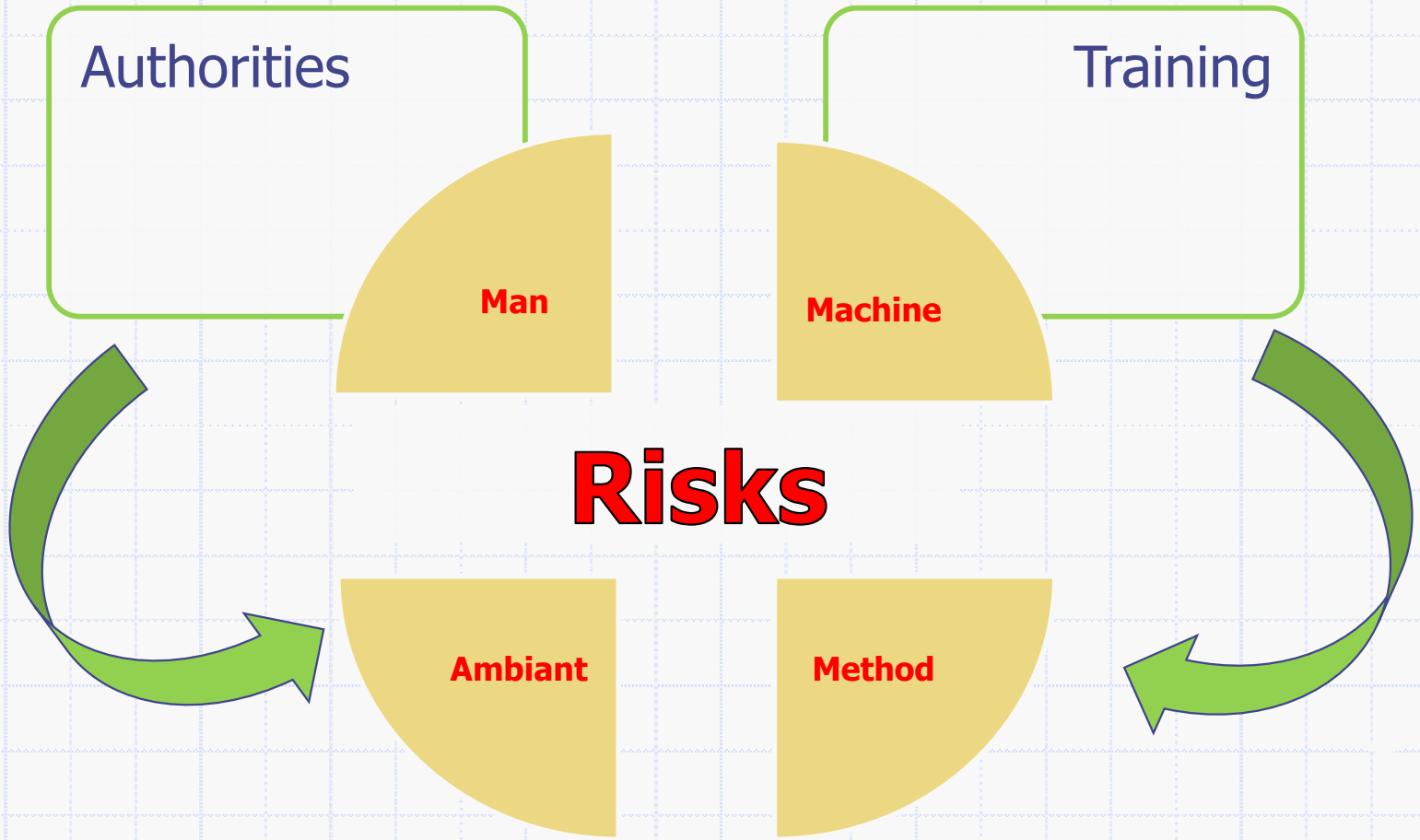
2. **The Hobbyist – 20%**
   - Weekend riding - The
   - The man /machine interactor
   - Groupie rides

3. **The Sports Enthusiast – 10%**
   - Thrill seeking
   - Competition
   - Record setter

Learning Point 1

To understand
the **OBJECTIVE** behind the **USE**,
is to establish
the **RISK** behind the **USER**

Risk Matrix



Learning Point 2

The RISK INDEX is an algorithm factored on Designing Standards, Training & Risk Mitigation.

The Authorities

Safe motorcycling and the reduction of in-built hazards are dependent on responsibilities associated with **THE AUTHORITY**

1. **Road Design**
   - Steel crash barriers sharp edges
   - Central barriers steel vertical uprights
   - Speed bumps
   - Sub standard road grit material
   - Polishing effect of tarmac due to sub standard build materials
   - Roads designed for Cars.
   - Lack of gradient banks on curves

2. **Maintenance & Repair**
   - Use of loose gravel ideal for skidding
   - Cut away sections resulting in knife edge that shred tyres and rims
   - Lack of signage and safety measures regulating safe motion

3. **Highway codes, Licencing & Enforcement**
   - Car drivers licence B category automatically qualify to ride motorcycles not exceeding 125cc/11Kw – DESIGN FOR TRAGEDY
   - Promoting motorcycles as a means to beat the traffic and other unsafe practices such as filtering through traffic

Training

The aspect of training provides adequate knowledge for the achievement of the licence but falls perilously short of advanced skills to interact Rider vs Machine vs Road mania.

1. **Advanced skills required immediately**
   - Stopping power – Stability in use of extreme braking,
   - Rider prevention of skidding - Physics of skids, Velocity ratio & Friction
   - Constant Velocity riding in bends
   - Handling bikes in turning circles.
   - Judgment on performance handling

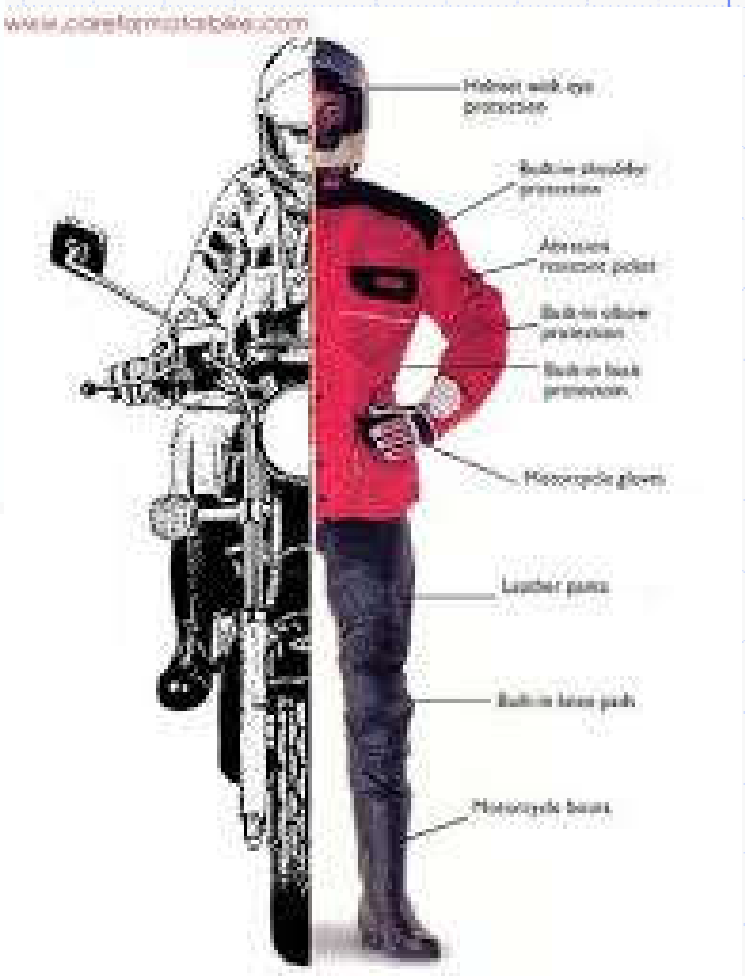
2. **Bike design promoting safety**
   - Weight distribution
   - Tyre size
   - Disc brakes over drum brakes
   - Power Vs Speed

3. **Lessons to be learnt… quickly.**
   - Those moments of exuberance – Tone down
   - Car blind spots
   - Lights On.
   - Speed kills
   - Using Power safetly
   - Peer pressure & group riding
   - Buy-a-bike-to-beat-the-traffic - RETHINK.

Learning Point 3

Riders without
TRAINING
are the most likely to get
INJURED.

Riding Personal Protective Equipment



Learning Point 4

Riders typically wear Helmets, gloves and other PPE, however are often unfamiliar with the handling characteristics of their machine.

Risk Factors

Mitigating risk and preventing accidents , requires that a through risk assessment to be undertaken comprehensively across those characteristics that contribute towards safety, or the lack of it.

The overall risk rating is a compendium mix of factors directly related to:

MAN Vs METHOD Vs MACHINE Vs MILEAGE.

Let's make no secret … It is the factors identified directly under these 4 groups will have the largest contributive measure towards biker safety.

Risk Mitigation Measures

Man

Machine

Method

Ambiant

Risk Mitigation Measures

Man

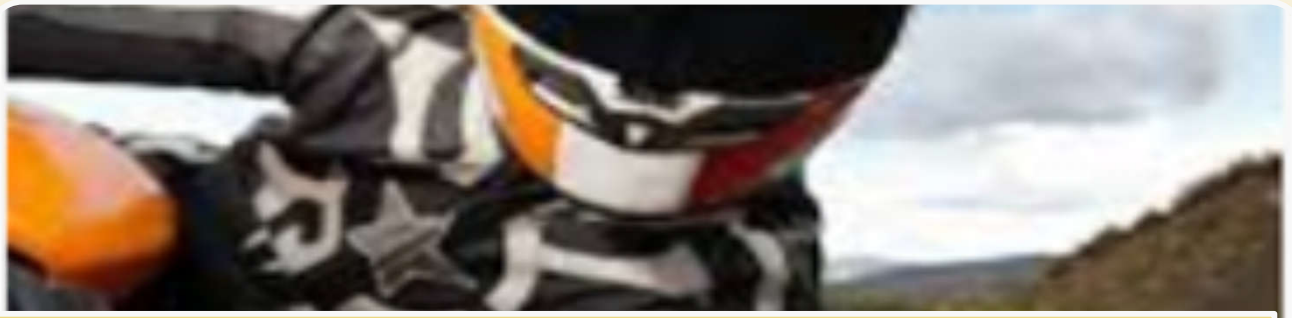
1. Peer pressure
2. Impatience & Lack of prudence
3. Thrill seeking character / Speed Junkie/ Road Racer
4. Beat the traffic attitude
5. Incompatible character trait to safe motorcycling
6. Biker seeks safety from external factors rather taking measures for them.
7. Lack of PPE especially sight-wear.
8. Reduced forward scanning capability of traffic factor
9. Misguided sense of entitlement on the road .

Risk Mitigation Measures- Man

Machine

1. High performance sports bike, highest risk vehicle
2. Faulty or badly maintained machines
3. Incompatible choice of machine to suit rider or roads.
4. Reduced handling capability at extreme speed or braking
5. Non road legal modifications to power, braking & styling.

Risk Mitigation Measures



Method

1. Riding into confined spaces
2. Constant overtaking
3. Filtering mania in moving traffic jams
4. Erratic movements due to bike agility in manoeuvring
5. Exuberant feeling of invincibility
6. Riders not visible to others
7. Over-speeding & reduced skills on braking/manoeuvring
8. Lack of effective braking technique. Panic stops
9. Stop signs mean STOP.

Risk Mitigation Measures

Ambiant

1. Road conditions, traffic and moods
2. Road gravel, oil, pot holes and damage
3. Night riding & visibility to others
4. Day riding sun visor.
5. Spring time – pollen, bees & flies.
6. Sleeping policemen and humps – Low speed and high speed.
7. Water planning at high speed.
8. Dust from road & commercial vejicles
9. Stray animals

Biggest threats to Motorcyclists (i)

1. **Oncoming traffic**
   - It doesn't matter what causes it, but all it takes to cause a serious wreck is for one driver to drift into the other lane.

2. **Cars waiting to turn**
   - Intersections are about as dangerous as it gets, and part of that has to do with drivers making careless left turns.

3. **Panic Stops**
   - Since your front brake provides 70% of your stopping power, you have to use it, but if you grab the brake too hard, locking up your front wheel and throwing yourself off the bike are always risks.

4. **Gravel on the Road**
   - Gravel kills your grip, causing your bike to behave unpredictably and easily causing a wreck. If you're going to go down, a low-side fall is about as good as it gets.

4. **Over-speeding through a corner**

New riders are especially at risk of taking a corner too fast, but even experienced riders occasionally make mistakes.

Biggest threats to Motorcyclists (ii)

6. **Opening Car Doors**
   - Cyclists have dealt with this problem for years, but it's even more dangerous for motorcycle riders who often travel at faster speeds than bicycles

7. **Drivers behind you**
   - Drivers who aren't paying attention have a habit of rear-ending other vehicles, and in most cases, it's unfortunate, but at least cars have crumple zones and seatbelts. When a distracted driver rear-ends a motorcycle, there isn't much to protect the rider even in a low speed crash.

8. **Drivers Changing Lanes**
   - Not all drivers signal their intentions before changing lanes, but most do. Paying attention to which cars are beginning to drift over can help you spot a dangerous lane change before it happens.

9. **Inclement Weather**
   - The roads get more slick, visibility is reduced, and drivers rarely adjust their speed, making the road a dangerous place for motorcycle riders.

10. **Drinking & Riding**

Mix that with the drinking culture that surrounds motorcycles, and you have a recipe for trouble.

Learning Point 5

Ultimately, effective control is upon the riders themselves. The risk factor is so high today that any rider who commutes daily is at the highest risk of injury at best, pleasure riders who seek a speed thrill are at high risk of death, and ultimately those pleasure riders who select occasional rides under 5k per annum seem to get away with it.

Of course there is much more, but enough for reasonable riders to accept the truth as where safety lies.

My choice ? ... solo riding, less than 5k a year average speed 60kmh, nothing over 90kmh, bike choice CBR1000, NO groupies, no commuting, pure pleasure, no rush hours, no riding on wet conditions. I have survived till now but admit that the writing is on the wall that the bike will be placed in a showcase. It is simply not safe anymore.

As for the others...God bless you.

STAY SAFE.

Profile

Adobe Acrobat Document

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Matthew Joslin qualified as a Mechanical Engineer in 1990, has had an extensive global career in Industrial and Business Management.

He has occupied a number of senior management positions within highly regarded companies including Merit (Malta) Ltd and Methode Electronics (Malta) Ltd. Value Engineering Services was established next in 2001, an Engineering consultancy unit which serviced market niches in business engineering, ISO 9001:2000 certifications, pre-risk & loss adjustment surveying, cost reduction programs and related management services.

He was appointed Chief Executive Officer with MSB Valletta Ltd in May 2006, General Manager of Sky Parks International Ltd and from November 2010 onwards Senior Customer Services Manager with Methode Electronics, GM of Servgroup Ltd apart from numerous consulting roles in Business Plan Development & Financial Budgeting, Capital Investments, Project Management, Accreditations, Business Process Restructuring & Quality Mngt. Systems, Building Engineering Services, IT and OHS amongst others.