

Metal Fabrication

3M ANZ
Vertical Markets Playbook



Introduction

The manufacturing industry consists of many sub-industries, inclusive of metal fabrication. Metal fabrication is the process of creating new structures, machinery and equipment from raw metal materials by burning, cutting, welding and detailed assembly.

The purpose of this Sales Guide is to assist our sales professionals in finding, keeping and winning business in the manufacturing and metal fabrication vertical.

Good luck!

Metal Fabrication

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Vertical Markets Playbook

**Metal Fabrication
Industry Overview**



Customer Profiles

Companies that have the approval to process metals in large quantities in an industrial setting.

Metal Fabrication Companies

- Administration, end-to-end metal production and other core activities
- Responsible for employee's safety and environment impacts
- Follow very restrictive and evolved local regulations
- Most Common: Respiratory, Hearing, Head and Eye, cuts and burns
- Opening for discussions on more conceptual security issues and more technological solutions
- Criteria: Regulation attainment, productivity, comfort.
- PPE validation implemented in some customers

Metal Fabrication Contractors

Individuals and companies that hold a license to either contract or supervise metalworking in industrial and residential settings.



- Services related to welding, residential enquiries and others considered non core

- Knowledge of the local legislation is sometimes limited
- Helping them to understand the regulation can open business opportunities

- The contractors have the same risks of a Metal Fabrication Company but, because of the nature of their work, they are more exposed to lower-risk activities such as basic welding and grinding processes

- Search for equipment that complies with the legislation
- Low PPE validation on these companies

Workshop Manager Persona

Metal Fabrication

One important stakeholder that will work on the Safety Solution definition. Know more about their personality:

As the safety manager I think about safety 24/7. My goal is to get my workers and contractors home safely after every shift, for each worker to be accountable for safety on the job site, and not to be seen as the safety cop.

This sounds simple, but it is very complex. While no day is typical, I wear 5 different hats to achieve this goal – there never seems to be enough time in the day to meet the demands of ensuring my workers are safe.

I oversee production, shipping, sales. I do the quoting myself. If there's any purchasing, that's all me. Accounting is all me. We have four employees that do all of the actual production of our end product.

My biggest challenge is making safety part of the culture and understanding regulations – a safety plan is great but everyone needs to own safety on the job site to make personal safety and the safety of others a reality.



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Role

- Responsibilities range from researching, selecting, approving, and ordering abrasive products to soliciting feedback from metalworkers and end users of products
- Manages internal processes and external relationships to ensure the success of the business
- Proactively look for solutions
- Want to be perceived as experts within their organization

Key Drivers

- Maintain strong relationships with clients and vendors
- Important to know what products can and can't do and which comply with regulations
- Look for innovative solutions, design, comfort, style and value-add features to increase usage & support safety program
- Ensuring costs are kept low to adapt to changing business environment
- Emotionally & rationally justifies paying more for quality products
- Interest in staying updated on new solutions, regulations and best practices
- Values products that meet high standards

Key Challenges

- High flexibility required between various responsibilities
- Training employees adequately and ensuring compliance
- Keeping up to date with new standards/regulations and what their responsibility is
- Maintain status quo in product quality while finding ways to be more cost effective
- Inconsistent production in job shops: can either be too many or too few orders

Other Stakeholders

There are other important stakeholders that must be considered in a relationship with a Metal Fabrication Company. In some companies, these stakeholders could have more influence on new safety solution introduction than the Workshop Manager, especially the Process Engineer and the Metal Fabricator.

Process Engineer

- Responsible for creating a process from a design to actual scale, working with a System Integrator and/or operations/technical teams to design and implement robotic systems
- Heavy influencers to moving forward with an automated solution and in selecting the suppliers to work with
- Customer satisfaction with more consistent and high quality finished parts
- Ultimate goal is to reduce costs
- Increase productivity, improve safety and working conditions
- Resistance from operators who fear being replaced
- Finding a trusted source that's not just trying to sell you something; "having an agenda"
- Developing a flexible and forward thinking solution that's modifiable and upgradable
- Knowing what mistakes to avoid
- Proactive innovators

Metal Fabricator

- Responsibilities range from metal fabrication, grinding and welding
- Heavy influencers to managing team due to expertise
- Strongly set in most processes and unwilling to change
- "If it ain't broke, don't fix it"
- Producing quality products with an efficient timeline
- Limited knowledge of new offerings
- Increase productivity in the work process better products can improve
- Uphold safety standards in workplace
- Resistant to process changes
- Busy schedule does not allow for seeking improvements outside of established process

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**Vertical Process
Map**

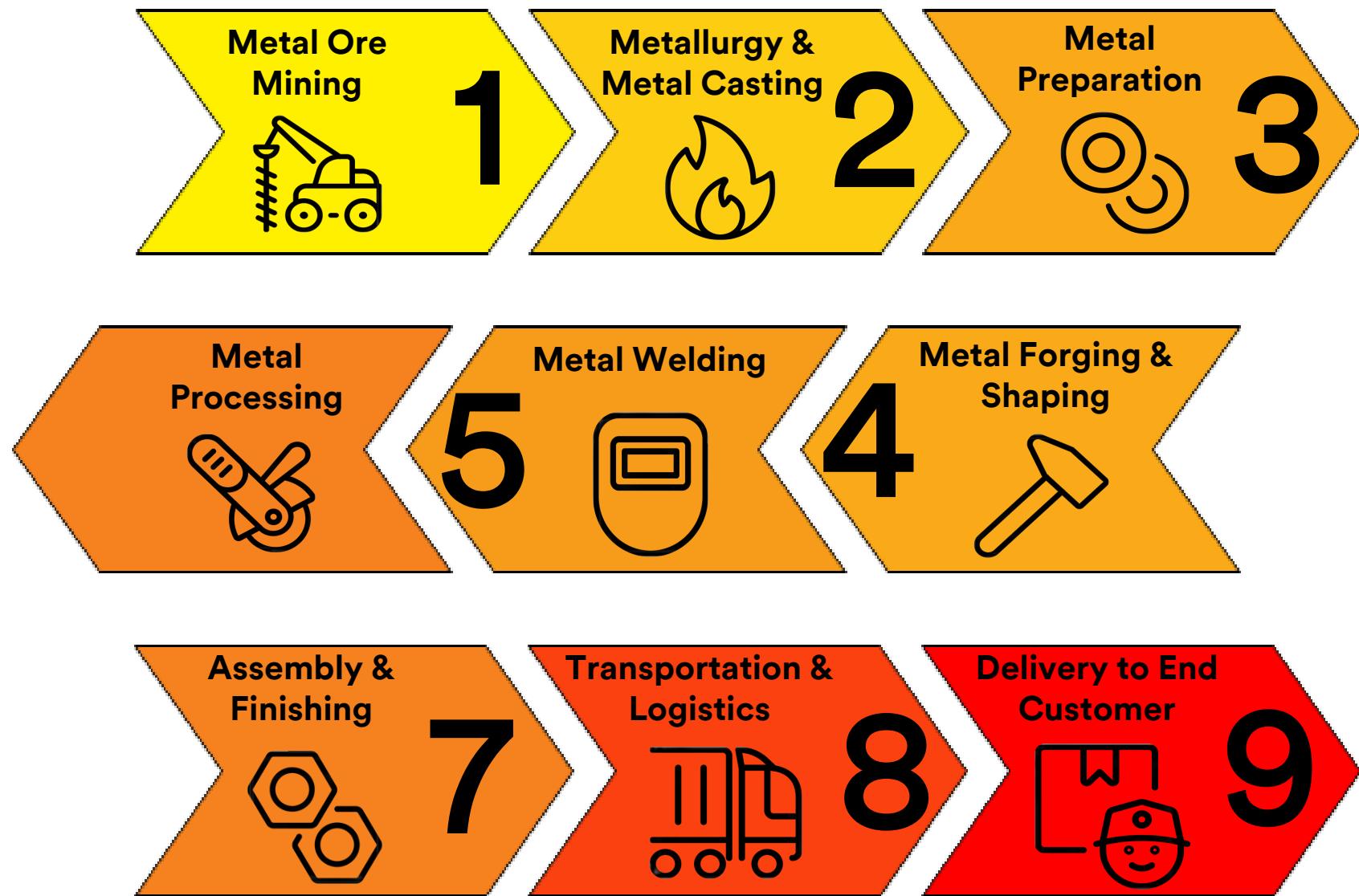


Metal Fabrication Process

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Key Applications

Cleaning

For the best final product, get a clean start during preparation (Step 3). 3M's abrasive solutions make your work fast and efficient, removing unwanted layers from the metal without damaging the underlying surface.

Cutting

Getting a clean cut on pipe or sheet metal can be tricky during processing (Step 6). 3M products make cutting and slicing fast and more precise, even performing metal plate dimensioning with ease.

Grinding

Remove metal and welds fast during processing (Step 6). Shape parts to meet project requirements. 3M offers a range of solutions, including blasting nozzles, grinding wheels and discs, to meet your metalworking demands – and get your parts into shape.

Welding

Our innovative welding safety products enable welding performance and make the welder's job safer and more comfortable (Steps 5 & 7). 3M's knowledge and experience of welders' working conditions sparks innovative development of products that enable welding performance.

Assembly

Easily join and attach metal pieces and parts together (Step 7). 3M Tapes and Adhesives can help you deliver high quality, high-impact designs with unlimited potential, eliminating welding and grinding required to prepare welds for finishing.



Risks / Needs



Noise of tools during cleaning, deburring, grinding, welding and other metalworking processes during construction.



Chemical processes and metalworking processes that produce gases and vapors, generated by welding or grinding.



Metalworking can expose workers to dangerous metal fumes and particles, particularly during welding processes. Sparks may also be a present danger in workshops.



Dust and particle projections can injure the employee's eyes. The eyewear solution should have a good relationship with the earmuff.



In the workshop locations, the workers are close to the process equipment, sharp objects and large machinery, and need to be seen by other workers.



Workers can also hit their heads against metal pieces or any other protruding part of the structure. Tools or any other object may fall.



The activities of metalworking in workshop and residential locations may involve work at heights with the risk of falling workers or tools.

3M Solutions

Application



Clean&Strip Pro
Coating Disc
VFN Hand Pads

PPE



TA570 Helmet
Secure Fit™ 400
Peltor™ X4
9322A+
7551 Spraying Kit
TRM-300C
Welders Harness



Risks / Needs



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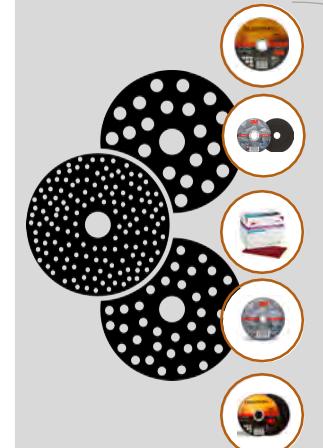
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3M Solutions

Application



Cubitron II COW
Silver COW
VFN Hand Pads

PPE



TA580 Helmet
Secure Fit™ 400
Peltor™ X4
9322A+
6528 Welding Kit
TRM-300C
Welders Harness



Risks / Needs



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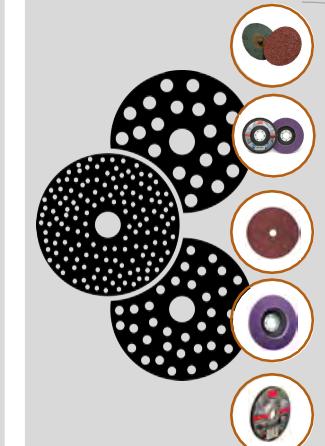
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Application

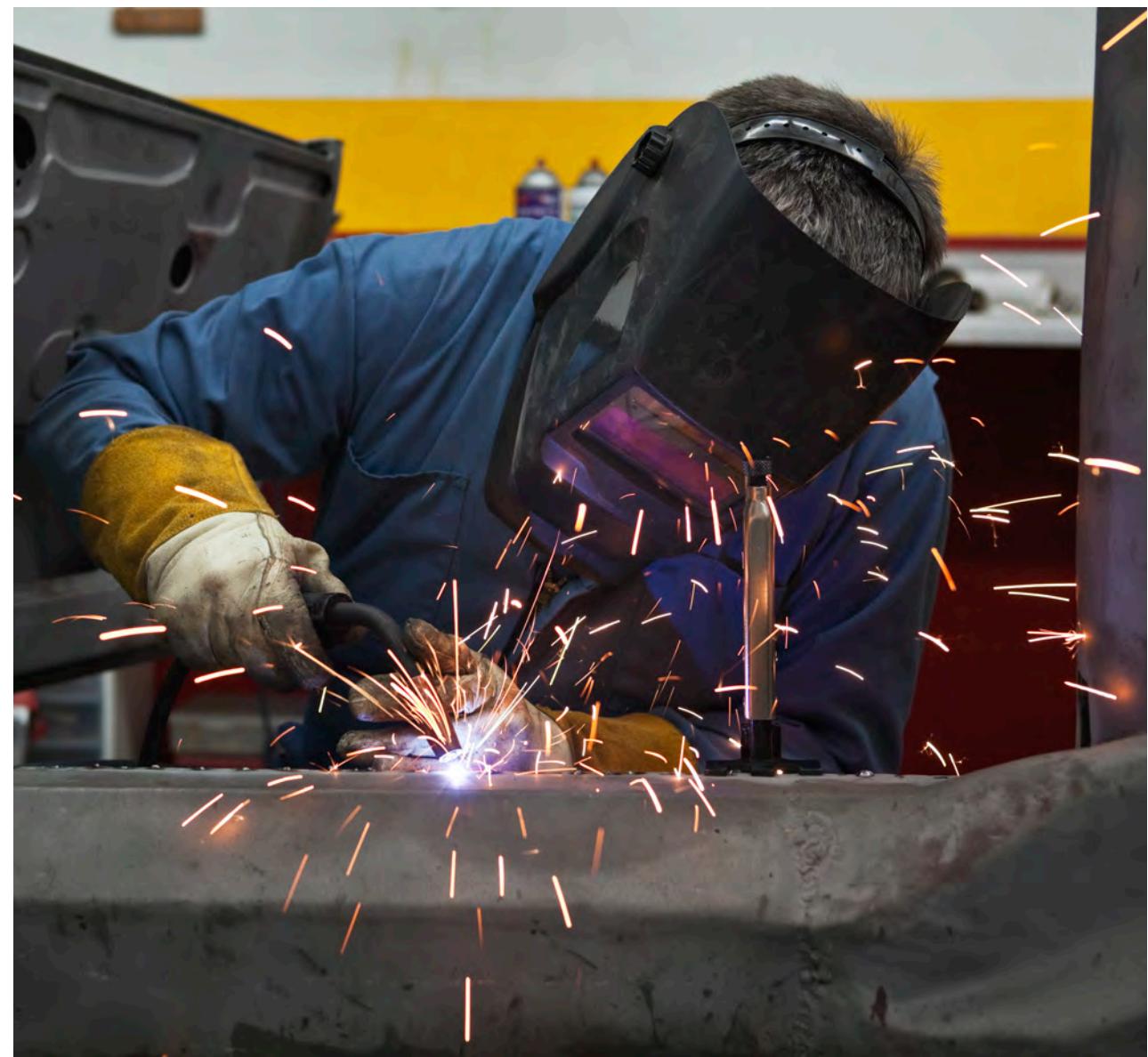


Cubitron™ II Fibre
767 Flap Disc
Silver DCGW

PPE



TA580 Helmet
Secure Fit™ 400
Peltor™ X4
9322A+
6528 Welding Kit
TRM-300C
Welders Harness



Risks / Needs



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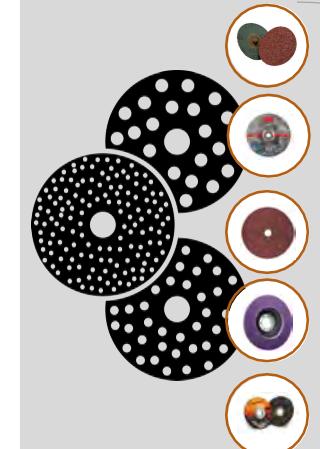
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3M Solutions

Application



Cubitron™ II Fibre
Cubitron™ DCGW
Silver DCGW

PPE



TA580 Helmet
Secure Fit™ 400
Peltor™ X4
9322A+
6528 Welding Kit
TRM-300C
Welders Harness



Risks / Needs



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3M Solutions

Application



- VHB™ 4910
- Epoxy
- Reflective Tape
- Hazard Tape 94
- Tape Primer 471
- Vinyl Tape
- Duct Tape 3903

PPE



- TA570 Helmet
- Secure Fit™ 400
- Shade 5 Visor
- E-A-R™ Flexible
- Peltor™ X4
- 9322A+
- Welders Harness

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Product Sales Guide



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Sales Guide

Abrasives

! Problem

Cleaning

Metal Fabricators have a need to prepare surfaces, including precious metals, and remove any dirt or substrate. Without the correct disc, this process can be lengthy and inefficient, increasing labour time and affecting final outcome.

- Solution

The 3M Scotch-Brite Clean & Strip Pro Disc is a general purpose disc. The non-woven surface is a safe alternative to wire brushes, offering a greater surface area which leaves a finer finish and may eliminate the need for subsequent finishing steps.

! Problem

Cutting

Metal Fabricators come across a need to cut precious metals and steel in their jobs every day. Without the correct disc for a cutting application, workers are unable to cut cleanly and safely and put their personal safety and the safety of others at risk.

- Solution

3M Cutting Wheels are designed to safely cut through metal, stone and sheets with exceptional precision. The 3M Silver Cut-Off Wheel has exceptional durability, making it a great value long-term offering. 3M Precision-Shaped Grain also cuts exceptionally fast, increasing worker productivity.

Typical Sales Cycle



3M™ Silver Cut-Off Wheel



3M™ Clean & Strip Pro
XT-DC Disc

1 Discussion with customer about application and practicality

2 Propose product and service with a demonstration

3 Present the commercial conditions

4 Ordering process

5 Service delivering

! Problem

Grinding

Workers may come across a need to remove unwanted area or material on a metal or steel surface. Without the correct grinding disc, workers have an increased likelihood of personal injury and/or damage to the surface.

- Solution

3M Grinding Discs are constructed with 3M Precision-Shaped Grain to bring you an exceptionally fast-cutting and long-lasting rigid bonded wheel for heavy-duty grinding applications. Our grinding wheels and flap discs work well on almost all materials.

! Problem

Welding

Welders may need to remove old welds, and unwanted materials or surface areas on the metals. These workers have an increased risk of personal injury to themselves and risk damage to the joined or welded surfaces.

- Solution

3M Flap Discs and Cubitron II Fibre Discs let you breeze through a wide range of tough jobs around the shop, including grinding, weld removal, deburring and more. These smooth-running wheels are designed to cut with less pressure. Discs are also engineered to cut faster, cooler and with less grinding pressure than conventional abrasives.

Typical Sales Cycle



3M™ Cubitron™ Fibre Disc 982C



3M™ Flap Disc 769F

1 Discussion with customer about application and practicality

2 Propose product and service with a demonstration

3 Present the commercial conditions

4 Ordering process

5 Service delivering

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Sales Guide

Adhesives



Problem

VHB



Problem

Epoxy



Problem

Hazard Tapes

Metal joining is a large part of the industry, and stability, reliability and longevity are key to a good structure.



Solution

3M VHB Tapes can replace screws, bolts and rivets, thereby reducing corrosion, water ingress points and stress localisation during fabrication projects. 3M VHB Tapes are also weather-proof and will create a permanent hold in a large number of conditions.



Solution

3M™ Scotch-Weld™ Epoxy Adhesive is a toughened, two-part epoxy adhesive. It exhibits good shear and peel strengths along with good impact and durability. It bonds extremely well to many surfaces, such as metals, ceramics, wood and some plastics.



Solution

3M™ Reflective Tapes & Hazard Tapes are highly visible with pressure sensitive adhesive for easy application to large vehicles, machinery and equipment. This helps to enhance visibility and detection distance in both day and night time.

Typical Sales Cycle



3M™ VHB™ Clear 4910



3M™ Epoxy Duo Pack DP-420

3M™ Reflective Tape

1

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Sales Guide

Head, Eye & Face



Problem

Head



Problem

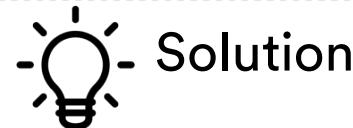
Eye



Problem

Face

For people working in busy workshops there is potential for head injuries from falling objects, flying/swinging objects, overhead hazards, electrical hazards and much more.



Solution

The UniSafe TA580 is an Australian Made Polycarbonate unvented safety helmet. The polycarbonate Type 2 safety helmet is ideal for smelting, welding and high temperature areas.



Solution

3M Safety Spectacles are designed to protect workers from hazardous object contact and dangerous radiation in a stylish and comfortable way. Choosing the right spectacles for a workers job relies upon ergonomics, view, security and coverage.



Solution

3M Visors are durable, high impact, heat and chemical resistant, and reduce the potential impact of flying pieces, particles, sparks and splashes.

Typical Sales Cycle



3M™ Safety Helmet
Polycarb TA580



3M™ SecureFit™ Protective
Eyewear 400 Series



1

Discussion with customer about application and practicality

2

Propose product and service with a demonstration

3

Present the commercial conditions

4

Ordering process

5

Service delivering

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Sales Guide

Hearing Protection



Problem

Plugs



Problem

Muffs



Problem

Comms

Hands and gloves are seldom clean, and are usually covered in dirt and dust. By using dirtied hands to insert earplugs, workers risk serious ear infections with prolonged use.



Solution

3M Earplugs have easy insertion without rolling the foam, which makes them ideal for workers' dirty hands.



Solution

3M Earmuffs are designed to adhere to local standards, enhancing comfort and protecting from extreme noise hazards.



Solution

3M Communications products are intrinsically safe and ensure sufficient noise blockage whilst opening radio communication pathways.

Typical Sales Cycle



3M™ E-A-R™
Flexible Fit Earplugs



3M™ PELTOR™ WST
ProTac XPI



3M™ PELTOR™ X4

1

Discussion with customer about application and practicality

2

Propose product and service with a demonstration

3

Present the commercial conditions

4

Ordering process

5

Service delivering

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Problem

Fabricators working with material handling, sharp and precious metals can be exposed to a wide range of hazardous materials and abrasion.

The bare hands of workers do not have the grip required to hold on to slippery, wet or oily surfaces.



Consequence

Without proper care taken, workers risk cuts, burns and severe injuries to hands and fingers.

Not having proper grip risks that sharp or heavy objects can be dropped or slip, creating potential for injury to themselves and others.



Solution

3M Comfort Grip Gloves are a light, abrasion-resistant alternative to cotton and latex-palmed gloves. 3M Comfort Grip Gloves also meet local Australian standards.

These gloves are ideal for light to medium duty jobs that require precision handling, especially in hot and sweaty conditions.

They are a long-lasting product that provide excellent grip, even in wet or oily conditions.



Open a Call

- What type of work are you completing? Light or heavy duty?
- Do you handle objects frequently that have potential to slip or be dropped?
- Are you handling slippery, wet or oily materials?

Typical Sales Cycle



3M™ Comfort Grip Glove

1

Discussion with customer about comfort and compatibility

2

Propose product and service with a demonstration

3

Present the commercial conditions

4

Ordering process

5

Service delivering

Metal Fabrication Playbook

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Problem

People working in metal fabrication are exposed to metal dust, welding fumes and other dangerous particles. This can also extend to diesel exhaust and smoke when working in machinery operation.

Workers in hot and humid workshop conditions are more inclined to remove face respirators if they become hot and sweaty.



Consequence

Without correct respiratory protection, workers risk breathing dangerous particulates into their respiratory system, and can potentially cause conditions such as asthma and silicosis, and has potential to increase the likelihood of respiratory cancers.

When a worker decides to remove their mask in an uncomfortable situation, they are immediately compromising their protection against dangerous particulates.



Solution

3M Disposable Respirators are designed to protect workers with a wide range to suit all face types, and stay securely in place. They accommodate for facial movement and have compatibility with other 3M Face Protection products.

3M Aura 9322A+ Disposable Respirators are fitted with an innovative cooling valve, exclusive to 3M, to ensure maximum comfort. This mask is also collapse resistant and has a sweat absorbent nose pad to create a comfortable environment for the face.

Disposable Respirators



Open a Call

- What types of particulates are you exposed to?
- Are you working in hot, humid conditions?
- Do you work in machinery operation or have contact with heavy machinery?

Typical Sales Cycle



3M™ Particulate Respirator 9322+P2

3M™ Cupped Particulate Welding Respirator P2 8514

1

Discussion with customer about comfort and compatibility

2

Propose product and service with a demonstration

3

Present the commercial conditions

4

Ordering process

5

Service delivering

Metal Fabrication Playbook

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Problem

Workers in metal fabrication workshops can be exposed to a range of hazardous contaminants such as silica dust and particulate matter.

Welders require extra protection from welding fumes and dangerous metal dust particles.



Consequence

Without proper respiratory protection, particulates can make their way into the respiratory system of workers and increase the likelihood of respiratory diseases such as asthma, fibrosis and cancer.

Inadequate respiratory protection whilst exposed to gases and vapours can result in serious damage to the lungs and body, and create significant long-term illness.



Solution

3M Reusable Respirators meet Australian local standards for protection against a range of harmful substances, and are a comfortable choice for protecting mine workers.

3M Reusable Respirators have a secure facial seal, and are designed to keep out any harmful substances.

3M Respirator Kits are designed for convenience and ease of use, including a mask and filters optimised for each application.



Open a Call

- Are you exposed to dust, gases, welding fumes or other airborne particulates?
- Do you require half face or full face protection?
- Are you looking for a mask and filters specific to your application?

Typical Sales Cycle



3M™ Spraying
Respirator Kit 7551 A1P2



3M™ Welding
Respirator Kit 7528

1

Discussion with customer about comfort and compatibility

2

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Service delivering

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Sales Guide

Powered Air



Problem

Workers in metal fabrication workshops can be exposed to dangerous particulates, such as silica and other small metallic and dust particles. Welders are also exposed to dangerous gases from open flames.



Consequence

Without proper protection, particulates can make their way into the respiratory system of workers and increase the likelihood of respiratory diseases such as asthma, fibrosis, silicosis and pneumoconiosis.



Solution

3M Powered Air Units and Accessories adhere to Australian local standards for protection against harmful substances and are a comfortable choice for protecting mine workers.

Powered Air products have a protection factor up to 100+, based on the filter being used. These units also reduce inhalation and exhalation resistance. This is done using either an open head top or tight-fitting mask.



Open a Call

- What type of dusts and particulates are you exposed to?
- Are you exposed to vapours and gases from welding processes?
- Will you require other PPE equipment (helmets, hearing etc.)?

Typical Sales Cycle



3M™ Versaflo™ TR-300C

1

Discussion with customer about comfort and compatibility

2

Propose product and service with a demonstration

3

Present the commercial conditions

4

Ordering process

5

Service delivering

Metal Fabrication Playbook

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Problem

Harnesses with traditional designs to maintain low prices do not include features that make harnesses safer, more comfortable or versatile.

The use of personal SRLs is increasingly common and without an adapter they're difficult to connect; the dorsal ring moves when weight is applied during the workday.

Harness is difficult to adjust/manage webbing.



Consequence

Workers complain about the comfort of harnesses when they are used all day.

The harness connection systems for P-SRL are not intuitive or can generate possible incompatibilities when using the harness together with other equipment, increasing fall risk due to improper donning and adjustments.



Solution

3M Harnesses are redesigned with a variety of configurations and meet local standards.

These harnesses are enhanced with upgraded features like lightweight aluminum hardware, auto-resetting lanyard keepers, revolving torso adjusters that facilitate adjustment and more!

Some models also include a built-in easy-link personal SRL adapter.



Open a Call

- How are you using harnesses in your daily tasks?
- What type of work are you conducting at height?
- Do your harnesses facilitate the connection of P-SRL?
- Do your harnesses meet the requirements of local standards?

Typical Sales Cycle



1

Discussion with customer about comfort and compatibility

2

Propose product and service with a demonstration

3

Present the commercial conditions

4

Ordering process

5

Service delivering