

DMS technologies

COMPANY PROFILE

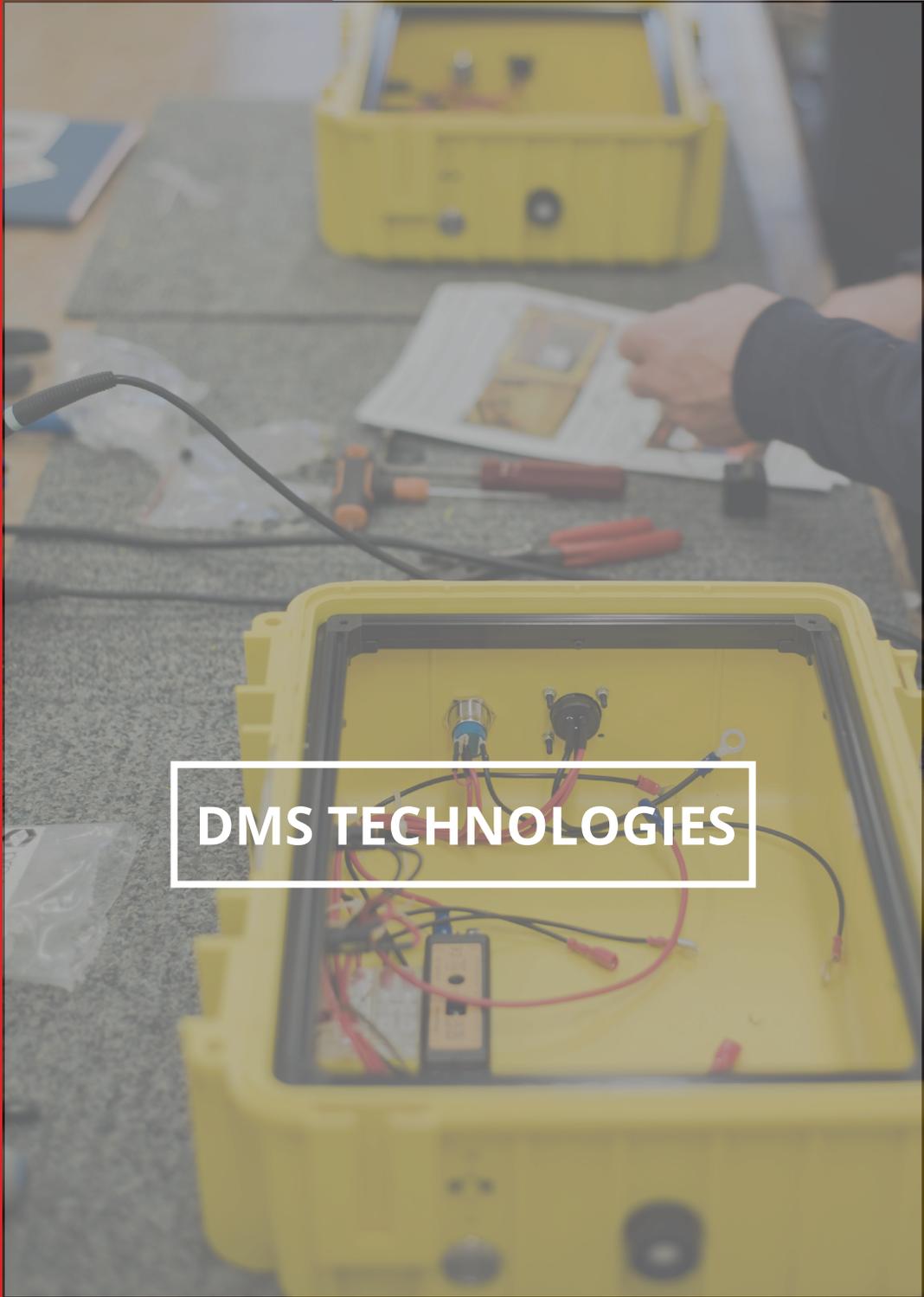


BRANDS WE WORK WITH



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DMS TECHNOLOGIES



MANUFACTURING

DMS technologies' purpose-built 18000sq. ft manufacturing and assembly facility in Romsey, Hampshire features both long run and small batch production lines.

CORE VALUES

We believe DMS technologies is at the forefront of the marketplace and we work to promote a set of core values that enable us to stand out from the competition.

CONTACT US

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WHO ARE DMS TECHNOLOGIES?

DMS technologies is a leading supplier of DC power systems and battery based electrical products.

Established in 1986 we design, manufacture and supply high quality reliable power solutions to a wide range of demanding markets and applications. Based in the UK, our high level of quality control, engineering and manufacturing capabilities allow us to provide a range of power solutions.

Our products include batteries, charging systems, inverters, rectifiers and power management. We package the optimum combination of products in to a bespoke system matching your application, to suit technical and commercial requirements.

Our vision is to offer technically innovative energy systems to global markets including Rail, Industrial, Automotive, Military, Telecoms, Aviation and Oil & Gas.

INDUSTRIAL



With over 25 years' experience DMS technologies understands that today's industrial market requires more than just a battery supplier.

Successful organisations require a battery partner to fully understand their requirements and provide solutions that combine physical, electrical and financial demands. We have experience in a range of Industrial applications supplying different solutions ranging from standard batteries to custom-built power solutions.

CASE STUDY: SUPPLIER TO UTILITIES

Developing a truly portable piece of equipment for environmental scientific analysis

PROBLEM

The company had developed a mains powered analyser but customers started to request greater portability and had developed a basic specification with a view to building in-house. However they decided to use a specialist company with the knowledge and experience of integrating power within rugged cases in order to ensure consistency in build quality as well as product availability. A further challenge was that because they had originally planned to manufacture in-house their budget was quite restricted.

SOLUTION

DMS technologies was approached due to our expertise with portable power systems built into rugged cases. The company's other products involved Peli-cases so a matching case was selected. We also expanded the original specification to include State-of Charge indication and a Low Voltage Disconnect to protect the built-in battery. All this was achieved on time and within budget.

KEY ADDITIONAL FEATURES

Through using DMS technologies' technical knowledge and capability, our customer benefited from:

- Peli-Storm IM2075 Case
- 12V 12Ah Battery
- 100W Inverter
- Wide Input Charger for Global Operation.
- State-of-Charge Indication
- Low Voltage Disconnect

TELECOMS



As a leading supplier of equipment and batteries into the telecoms arena, DMS technologies has the in-house skills and experience to provide the industry with cost effective, reliable, power solutions.

We have experience dealing both directly with network operators and as secondary suppliers.

CASE STUDY: MWC COMMUNICATIONS

Grab-and-Go Connectivity

PROBLEM

MWC Communications' objective is to deliver instant internet access anywhere. They have a range of hardware that can be installed on site to provide connectivity but this requires power and an installation team. What they needed was a quick, portable solution that was easy to setup and could be in place for a few of hours to a few months. MWC engineers were familiar with Peli products for storing and transferring equipment, they understood they could simply keep the connectivity equipment in such a case but wanted the "Plug & Play" facility. Another issue they were faced with was how to integrate a battery that allowed the units to be truly operational anytime, anywhere. Furthermore, the unit had to be easily transportable internationally.

SOLUTION

DMS technologies was approached due to our expertise in integrating custom design batteries into portable rugged cased systems. A housing was designed to secure the connectivity equipment within the case, wired to provide both internal and external connection points. With various DC voltages required, a suitable PSU, along with DC/DC converters, were installed for both mains and battery operation. While lightweight batteries were specified, the use of lithium was discounted due to the transportation issues of batteries above 100Whr. Instead, the use of high capacity NiMH cells was recommended, balancing weight and energy density with simple transportation requirements.

BATTERY FEATURES (HD4 MAXI)

- 2 off 24V 9Ah NiMH batteries
- 30 hrs run-time in normal operation
- "Push-to-test" state of charge
- Hot-swappable without connectivity interruption
- 16hr recharge time from fully discharged batteries.

DEFENCE



Whether it is high-end technology or “Squaddie proof” robust equipment to survive the toughest environments, our proven track record in supplying military power systems has our equipment serving with various armed forces all over the world.

As specialists in portable engine starting equipment, our NATO codified engine slave start packs are used on contract with the UK MoD and various military organisations around the globe. We worked with the Royal Navy to specially design and test packs to power Miniguns mounted on decks. Designing bespoke and modified off-the-shelf power systems, we work with you to choose the best technology and best design for the application. This can be from specialist batteries, small battery packs and man-portable remote power supplies.

CASE STUDY: SECURITY COMPANY

The project was for a mobile remote operating CCTV unit, incorporating cameras, infra-red sensors, lights, digital recorder and communications to run 24/7 all securely housed within a towed trailer.

PROBLEM

DMS technologies were approached for advice on the integration of batteries and charging to overcome refuelling and servicing of a 5KVA 110Vac LPG military generator. This was both during downtime and coupled with the noise concerns overnight. The input varied in terms of both voltage and current and the customer highlighted the low efficiency and resulting high cost of refuelling the generators, largely due to these fluctuating power consumption. This power source was then taken to a charger and a 10kWh battery bank.

SOLUTION

DMS technologies designed a control system that optimised the efficiency of the generator, battery bank and charger. The control system limited the optional time of the generator to when the total output load was within the most efficient parameters of the power unit. The control system took into account the variable load and recharge current requirements of the battery bank/charger. The total system was tested at the DMS factory and an estimated efficiency improve of 50% was shown.

RAIL



DMS technologies has supplied the rail industry with batteries for over 20 years. We are the UK's foremost authority on Cyclon batteries and have worked with Network Rail companies to develop and supply batteries and systems for both rail infrastructure and on-board applications.

Using a modular approach DMS technologies has Network Rail approval for point end switching, level crossing and general signalling batteries and battery/charger systems.

Using our experience we are able to provide technical assistance to supply up to date, modern solutions to replace historical inefficient battery and power equipment.

DMS technologies is the only UK company approved to supply Energys Cyclon Battery Packs to the rail market.

WIDE INPUT CHARGER FOR TRAINS

DMS technologies were approached by one of the UK's largest transport companies to provide a solution for charging batteries on board trains. The requirement was to charge large banks of auxiliary batteries that were either GEL or NiCd technology. Due to the environment the chargers need to accept a wide input, single-phase AC supply. Our Engineering team built a brand new solution while regularly reviewing progress with the customer. Various indicators were provided to aid operation of the charger and it was designed to be robust due to the nature of rail depots.



Duvine has been designing and manufacturing power supplies and chargers to the rail industry for over 30 years. They have worked directly with Network Rail and associated companies to develop and supply systems for both infrastructure and on-board applications.

Working alongside the industry and using our expertise and experience, they are able to provide technical assistance and design expertise to supply and create unique solutions, which are compact, modern, and fit for purpose in these harsh and demanding environments.

AUTOMOTIVE



As an established supplier to the Automotive market, DMS technologies has the ability to recommend and supply various technologies and products into the market.

We have a range of products that we have designed under our own Red Flash™ and Varley Red Top™ brands as well as distributing well know brands from global OEM's.

LITHIUM BATTERY FOR FORMULA 1

Following a recommendation from a major research agency, we were requested by a UK-based Formula 1 team to provide a lithium battery solution to power the fuel pump, telemetry systems and voice communications. A 13.2V 2.3Ah Lithium Nanophosphate re-chargeable battery was assembled using A123 cells. Due to various vibration and temperature concerns, particular attention had to be taken when designing, specifying materials and assembling the packs.

RED FLASH POWER PACKS

DMS technologies is the original and largest UK manufacturer of engine start packs. The Red Flash range has been specifically designed for the professional user and is suitable for starting most 12V and 24V engines – automotive, aviation, marine and rail. With safety in mind, each pack incorporates many special features. A reverse polarity warning reduces the risk of damage to on-board electronics. The on/off isolator switch enables safe connection due to non-live cable clamps and also avoids unintentional short circuits. The Polyethylene case provides a lighter, more robust housing compared to metal case designs.

MARINE



DMS technologies has a long history of supplying the marine market with auxiliary electrical solutions. We understand that marine customers expect a very high level of reliability from their power systems. DMS technologies' background in the highly demanding emergency vehicle market enables us to provide strong technical support when working with boat manufacturers, re-fitters and end users.

As a specialist power expert, not only do we supply a range of high quality batteries, we also supply ancillary electronics from some of the best manufacturers in the world. Whether you require distribution of individual products, or a fully bespoke power system, we can supply the best products for your application.

LIFELINE BATTERIES

Developed by the Concorde Battery Corporation in the USA, Lifeline™ Batteries are a direct spin-off from Concorde's industry leading aerospace battery range. Lifeline™ Batteries have earned global recognition as the premium AGM battery technology meeting the rigorous demands of a wide range of applications.

Lifeline™ Batteries have been designed for excellent all-round performance and extended cycle life making them ideal for all service load and starting requirements in yachts and commercial craft. They have a proven performance record in emergency services, military and recreational vehicles globally, offering market leading life expectancy.



MOTORSPORT



The Varley battery range has been the PREMIER choice for the professional and club racing car driver for some 60 years and the batteries have evolved over time to meet the changing demands of both motor racing and rally disciplines.

DMS technologies acquired the brand in 1986 and has used its experience and technical expertise to ensure that the Varley Red Top™ battery range is the best available for motorsport, with elements sourced from the best suppliers around the world.

The batteries and ancillary equipment are available across the globe via our network of specialist motorsports distributors. In recent years, Varley Red Top have expanded and added a Lithium Range to their portfolio.



MOTORBIKE



Skeyrichbatteries.co.uk is operated by DMS technologies, an independent UK battery distributor.

Skeyrich Powersport Batteries supplies high quality lithium batteries for motorcycles, ATVs, lawn mowers, quads, snow mobiles, scooters and watercraft. As a battery manufacturer we strive for high quality while keeping our costs low. Our staff has over 20 years of industry knowledge and experience.

You can be assured that when you purchase a Skeyrich battery you get a superior quality battery at an affordable price. Skeyrich Battery has continued to elevate our quality and consistency and we are proud to have been chosen as an Official Supplier for Ducati.

HIGH POWER PERFORMANCE

Our high rate lithium ion batteries are designed specifically for cranking, hence the high power performance.

The CCA ratings of many lithium batteries are often shown as PbEq (Lead equivalent).

Skeyrich Lithium Iron Phosphate (LiFePO₄) batteries are smaller in size than conventional motorcycle batteries, and lighter too, but they pack a whole lot of power for a pocket-sized dynamo. Manufactured with patented technology they offer a direct, small and lightweight, equivalent to traditional lead acid motorcycle batteries.

Skeyrich Batteries pioneered the use of LiFePO₄ in motorcycles achieving official supplier status for both Ducati and KTM.

OIL & GAS



The Oil & Gas market demands the highest quality solutions for applications where failure could prove catastrophic. DMS technologies' experience in this market and others that demand similar quality means that we can be your ideal battery partner. We work with some of the largest global organisations providing both standard and custom build power solutions to applications including standby power, remote monitoring, sub-sea and others.

DMS technologies focuses on quality products and customer service. We concentrate our resources on applications where reliability is key and where our engineering experience can aid our customers in achieving the best possible solution combining cost, quality and availability.

LITHIUM BATTERY PACK FOR A SUB-SEA APPLICATION

A petrochemical company had a requirement for a 21.6V 342Ah Lithium Thionyl Chloride pack to be assembled in a hexagonal, layered format. This involved the assembly of 108 cells in three layers with each parallel string being diode protected. The system operates at a low temperature, averaging around 9°C and the load current is continuously fluctuating. This meant extra consideration had to be taken in the design with Lithium being favoured due to its high energy density and lightweight.

AVIATION



With over 25 years' experience DMS technologies understands that today's industrial market requires more than just a battery supplier.

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DMS technologies focus on quality products and customer service. We concentrate our resources on applications where reliability is key and where our engineering experience can aid our customers in achieving the best possible solution combining cost, quality and availability.

AVIATION ENGINE START AND GROUND POWER UNITS

Our Red Flash portable aviation units have been designed for turbine starting and ground power support. With a strong proven record as the UK's original and largest professional start pack manufacturer, our power packs will start military and commercial aircraft, helicopters and other heavy duty vehicles. Based on 24V nominal batteries, these units are compatible with both 24V and 28V systems.

BENEFITS

- Currently in service around the globe with operations in hot and cold climates
- Wide operating temperatures -40 to $+50^{\circ}\text{C}$
- Single pack RF 1500 will provide over 1500 Amps starting current and can be linked to provide over 3000 Amps as the RF 3000
- Man portable
- Rugged for long life and durability

EMERGENCY SERVICES



DMS technologies has a long history of supplying specialist vehicle manufacturers and converters with auxiliary electrical solutions. Equally, Emergency Services organisations often require power in remote or rugged locations. 'Blue light' customers expect a very high level of reliability from their power systems, and DMS technologies' background in the highly demanding military and industrial markets enables us to provide strong technical support when working with converters and operators. We are able to offer a full design and supply service for projects, from initial concept through to full implementation.

RED FLASH DEEP CYCLE

Red Flash Deep Cycle Batteries, using Absorbed Glass Mat (AGM) technology, are amongst the highest quality in terms of reserve capacity, long cycle life and low internal resistance, while achieving superior cranking performance. These batteries are the smart choice for demanding industrial and recreational deep discharge applications. Deep Cycle refers to applications that typically discharge 50-80% of the battery capacity. These batteries feature thicker plates with a high-density active material.

UTILITIES



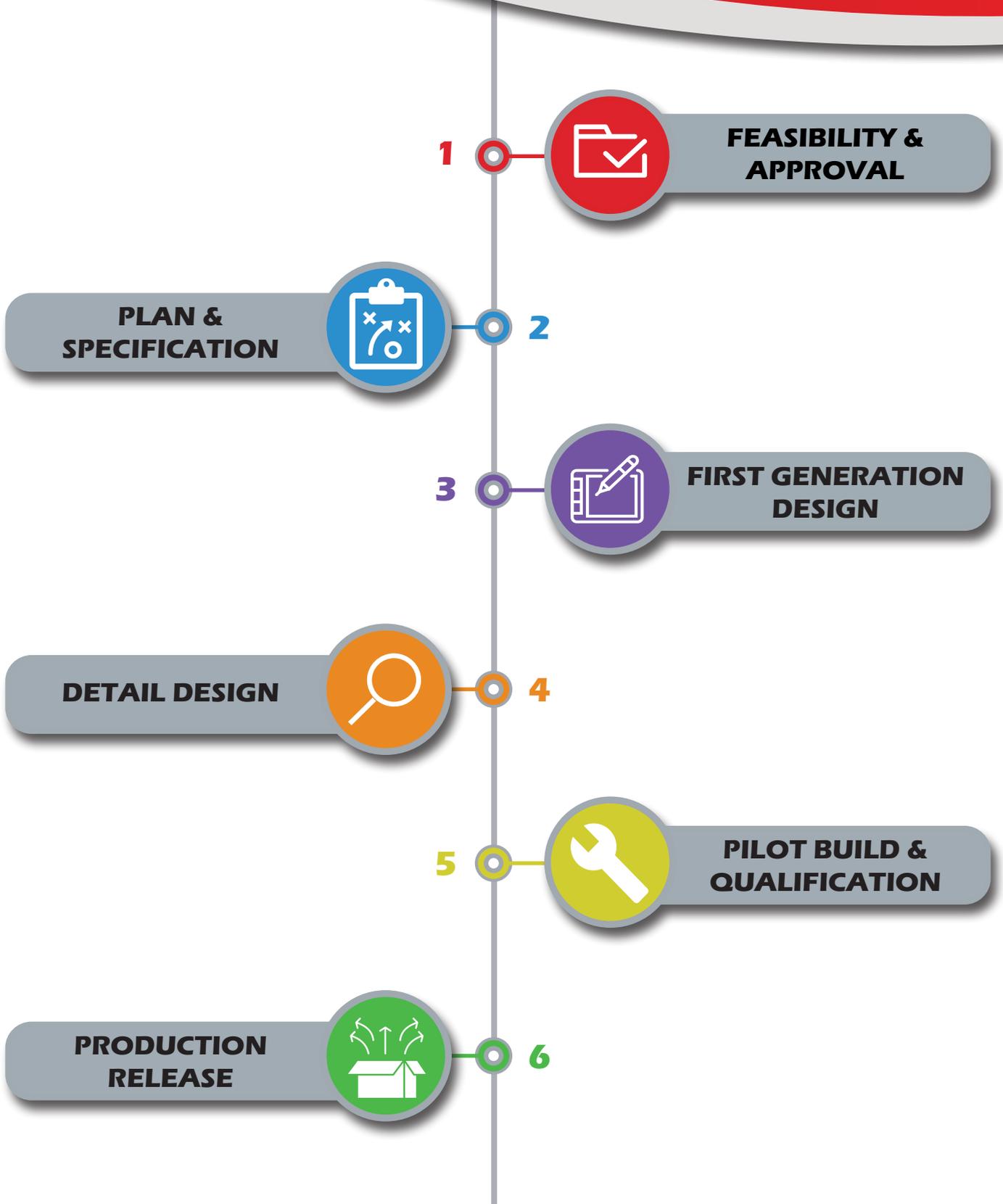
The Utilities market demands the highest quality solutions for applications where failure could prove costly. DMS technologies' experience in this market and others that demand similar quality means that we can be your ideal battery partner.

We work with some of the largest global organisations providing both standard and custom build power solutions to applications including standby power, remote monitoring and others; We also specialise in portable power solutions.

LITHIUM BATTERY FOR SWITCH TRIPPING

Due to our close relationship with a switch-tripping manufacturer, DMS technologies were approached to build replacement Lithium Primary Battery Packs. Two packs were built for each system and installed using the end users existing metal work. As the original packs predated the introduction of UN testing, DMS technologies undertook the highly demanding testing in order to meet required approvals.

RESEARCH & DESIGN CONSULTANCY



BATTERY CHEMISTRY

- It is available in all shapes and sizes.
- It does not require any maintenance.
- It is best in terms of reliability and working capabilities.
- It can withstand slow and fast charging.
- It is capable to withstand long term inactivity with or without solvent.
- It offers longest life cycle.
- About 97% of lead can be recycled and reused in new batteries.
- It offers good performance at low and high temperature.

LEAD ACID

LITHIUM

- Weight – Lithium chemistries are almost always lighter than VRLA or NiMH alternatives.
- High Cycle Life – even as low as 80% depth of discharge, Lithium batteries often exhibit a cycle life above 1,000 cycles.
- Low Self Discharge Rate – particularly true of primary chemistries.

- Weight – usually lighter than VRLA alternatives.
- Good cycle life.
- Cost – cheaper than lithium.
- Environment – does not contain the toxic materials present in NiCd cells.
- Safety – NiMH is an intrinsically safe chemistry and thus does not have any special shipping requirements. DMS technologies always provide battery packs with the required safety devices installed.

NICKEL METAL HYDRIDE

NICKEL CADMIUM

- Rugged, high cycle count with proper maintenance
- Good load performance; forgiving if abused
- Simple storage and transportation; not subject to regulatory control
- Good low-temperature performance
- Economically priced; NiCd is the lowest in terms of cost per cycle
- Available in a wide range of sizes and performance options



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