

Stock Data

Share Price:	22.63p
Market Cap:	£34.9m*
Shares in issue:	154.2m*

*As at 9 November 2020

Company Profile

Sector:	Healthcare
Ticker:	DVRG
Exchange:	AIM

Activities

DeepVerge plc ('DeepVerge', 'DVRG', 'the Group'), (formerly Integumen plc) is a vertically integrated business, collaborating technology platforms with partners in artificial intelligence, clinical research, water technologies, medical devices and life science. These collaborators are building their own technology on top of the Labskin AI backbone. Labskin allows skincare, healthcare, pharmaceutical manufacturers and cosmetic companies to test their products on human-like skin in a real-world environment with full access to multiple state-of-the-art partner technologies.

Group website: www.deepverge.com

Share price performance from 6 Oct.2020



Source: LSE

Past performance is not an indication of future performance.

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DeepVerge plc

With DeepVerge's recommended all share Offer ('the Offer') for Modern Water plc ('[Modern Water](#)', AIM:MWG) having being declared unconditional on [3 November 2020](#), new DeepVerge shares representing c.77.5% of Modern Water were yesterday Admitted to trading. The Merger, which was originally announced on [28 August 2020](#) along with a 10:1 consolidation (effective [15 September 2020](#)) of the then [Integumen plc](#)'s equity, was followed by the Group's official renaming on [6 October 2020](#). The shares of both companies have staged a dramatic revaluation since their first cooperation, which came in the form of a revenue-sharing and manufacturing agreement that was announced on [18 March 2020](#). Subsequent and particularly timely initiatives, developed with a series of collaborative partners in response to the coronavirus Pandemic, have served to highlight the potential for value creation through the combining of their skillsets, technologies and international reach, along with management teams that are 'switched on' to the prospectively huge long-term opportunities being presented through the ongoing health crisis. Having already demonstrated an ability to leapfrog giant corporations with their development of user-friendly, real-time COVID-19 detection and alert systems and thereby identify products that appear set to become embedded within the daily routine of global populations desperate to return to some sort of 'normality', DeepVerge's ability to adequately service the overwhelming international demand it prospectively faces may become the most significant challenge going forward as it seeks to satisfy what has potential to become an exceptionally rewarding, high-margin opportunity.

Extension of the Offer for Modern Water shares

Having chosen to [reduce the Acceptance Condition](#) under to Offer from 90% to 50%, thereby declaring it unconditional on 3 November, the Offer has been extended to 13:00hrs London Time on 17 November 2020. In tandem, DeepVerge stated its notice period for cancellation of the admission of Modern Water's share trading on AIM (anticipated around 8 December 2020) has begun, which can be expected to reduce the equity's marketability/liquidity. DeepVerge has also stated that should it receive acceptances under the Offer for (or otherwise acquire) 90% or more of Modern Water's voting stock, it will exercise its rights pursuant to provisions of [Chapter 3 of Part 28 of the Companies Act](#) to compulsorily acquire (or 'squeeze out') the remaining shares.

Rationale for the Merger – Perfect timing

DeepVerge's Board has recognised significant growth opportunities for its real time water contamination detection and environmental sector solutions as a result of COVID-19. In the first instant, this resulted in contracts for reagents with Modern Water, which are used by hundreds of water authorities and environmental management authorities to monitor systems with thousands of its proprietary Microtox units installed and serviced around the world. As a high reputation, standard-setting brand that retains significant international customer loyalty, the enlarged Group's product offering now extends to a highly complementary range of sensitive, real time alert & detection systems, environmental monitoring & membrane technologies, recovery & treatment services, medical devices and artificial intelligence ('AI') which, in the face of the present health crisis appears to uniquely position it to capture a good slice of this giant looming market opportunity.

At this time, it is possibly unrealistic to project the scale of the opportunity presented but, almost without exception, civilised nations can be expected to prioritise and coordinate pandemic 'control and containment' efforts, similar to being on semi-permanent 'war footing'. Major hikes in directed government, agency, utility and corporate spending that will inevitably result from such public efforts and national regulation, suggesting that the enlarged Group's responsive skillsets, IP, product offering, initiatives and international reach are set to find significant demand.

Offer Terms implied a significant premium for Modern Water

Under the terms of the Offer, Modern Water Shareholders are entitled to receive: one New DeepVerge share for every 10 Modern Water shares. Based on the Closing Price of 6 November 2020 of 28.75 pence per DeepVerge Share, it values the entire issued share capital of Modern Water at c.£15.1 million. The number of new DeepVerge shares expected to be issued pursuant to the terms of the Offer is 52,469,321. As a result, it is expected that former Modern Water shareholders will own c.32% of the share capital of the enlarged Group (or 34% on a fully diluted basis). The Offer represented a premium of approximately 8.9% based upon the Modern Water share closing price of 2.80 pence on 27 August 2020, being the day before the Announcement was made, or 58.9% to the 90-trading day average price of 1.92 pence as at the same date.

Enlarged Group strategy – Capturing a potentially giant, timely opportunity

DeepVerge's Board has recognised that the world remains inadequately prepared to cope with anticipated demands from global populations attempting to return their lives to some form of normality. Ongoing, instantaneous protection and warning systems will be required as semi-permanent features servicing broad communities through both the current Pandemic and in post-Pandemic environments. In this respect, the enlarged Group's combined skillsets, technological initiatives, collaborative partnerships (with, for example, [Dell Technologies](#), [Avacta Group plc](#), [Acumen Software \(Pty\)](#), [Aptamer Group](#) etc.) and expanded global marketing reach, could rapidly open such giant international opportunities for next-generation sensors, real-time personal testing, water contamination, environmental solutions, products & services.

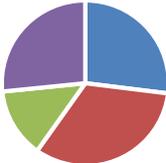
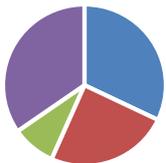
Just one of the initiatives taken in recent months, for example, delivered a user-friendly, real-time detection and alert system that is highly specific to COVID-19 (and potentially other coronaviruses etc.), in the form of a [personalised COVID-19 breath test](#) that interacts through a secure online complementary 'Digital Health Pass' platform. Potentially supported by future governmental safety regulation, appropriately priced products could be used to drive a consumer-led duty of care for personal responsibility. As such, it should enable businesses and individuals to triage those with infections, creating safer environments with the potential to limit self-isolation to only those that need it for the foreseeable future. A joint trial of up to 5,000 participants in parallel with third parties using [reverse transcription polymerase chain reaction](#) ("rtPCR") and [Antigen tests](#) is presently underway for product validation, with results anticipated before end-2020 which are expected to result in Microtox BT achieving its classification as a [Class 1 medical device](#) affixed with the relevant CE marking early in 2021. This is likely to be followed by a [510\(k\) premarket submission](#) to the US's FDA shortly after. Microtox PD (a novel near-source detection and monitoring system), for continuous detection of SARS-CoV-2 in sewage, is another example, also anticipated for launch in early 2021 and will be distributed through Modern Water's existing global footprint of over 3,000 installations and beyond. Potential markets already cited by DeepVerge could, for example, also include cruise liners, hotels and even office complexes where continuous surveillance to identify local outbreaks and rapidly determine areas for necessary containment could become required/regulated for their continuing safe operation.

As such, the enlarged Group's strategy will be: (i) to continue to focus on a high volume, recurring revenue mix within Modern Water's divisions, generating multiple streams from equipment consumables and predictive services; and (ii) continue to develop DeepVerge's core service offering to its principal markets. The new Board anticipates all parts of this strategy will be implemented in the 12 months following the publication of the Offer document. Moreover, it has no intention to change the location of Modern Water's places of business, considering its staff in the UK, US, China, and Japan retain deep domain knowledge in relation to both the Monitoring and the Membrane divisions and remain critical to the combined business model going forward.

Following completion of the Offer, it is intended that the Modern Water and DeepVerge company names will continue to be employed with respect to the services offered by each respectively, with the Modern Water name and its brands being used in respect of its operations underneath the parent company. The enlarged Group's focus will be to build profitably both organically and by acquisition as demand and opportunity arise. Both have in the recent past undertaken cost/overhead restructuring to improve operational efficiency and best position themselves to respond to such ambitions.

While at this time, awaiting regulatory approval and/or commercialisation of their COVID-19 related product within a highly fluid marketplace that may well find itself saturated with such offerings in relatively short order, TPI considers it would be unrealistic to estimate the scale of the Group's success in its target markets, prospective revenues and/or operating margins. It is clear, however, that the Group's apparent first mover advantage is key, along with sufficient availability, quality control and simplicity of use to successfully secure a slice of the giant opportunities being presented. DeepVerge, together with its collaborative partners, has the necessary balance sheet and marketing reach to capture it, something that should become clearer to investors when contractual orders are followed by first deliveries and the ramp-up of underlying demand can be gauged by DeepVerge's Board relatively early in the New Year.

Profile of DeepVerge plc and its Proposed Merger Target Modern Water plc

<u>DeepVerge plc</u>	<u>Modern Water plc</u>
 <p>www.DeepVerge.com</p>	 <p>www.modernwater.com</p>
<p>Existing Board of Directors</p> <ul style="list-style-type: none"> • Ross Andrews, <i>Non-Executive Chairman</i> • Gerard Brandon, <i>Chief Executive Officer</i> • Camillus Glover, <i>Chief Financial Officer</i> • Fionan Murray, <i>Chief Operations Officer</i> 	<p>Existing Board of Directors</p> <ul style="list-style-type: none"> • Gerard Brandon, <i>Non-Executive Chairman</i> • Simon Humphrey, <i>Chief Executive Officer</i> • Dr Nigel Burton, <i>Non-Executive Director</i>
<p>2019 Revenue Split</p>  <p>■ United Kingdom ■ Europe ■ United States ■ Rest of World</p>	<p>2019 Revenue Split</p>  <p>■ Americas ■ Europe ■ Middle East, Africa ■ Asia Pacific</p>
<p>Principal Operating Divisions</p> <ul style="list-style-type: none"> • Labskin - <i>Test platform that scientifically proves the impact of skincare product claims for healthcare, life sciences, clinical research</i> • Rinodrive - <i>Data aggregation, refining and AI analysis opensource eco-system designed to provide third-party service providers the ability to offer clients valuable insights</i> 	<p>Principal Operating Divisions</p> <ul style="list-style-type: none"> • Membrane Division - <i>Patented membrane technology. Platform applications for industrial applications and desalination.</i> • Monitoring Division - <i>Real-time/online Water Monitoring, Toxicity, Trace Metals and Environmental Monitoring</i>

Source: TPI, DeepVerge, Modern Water

Management changes resulting from the Merger

Other than Gerard Brandon being a director of both companies, following completion of the Offer it is intended that Dr Nigel Burton (presently a non-executive director ("NED") of Modern Water) will be invited to join the DeepVerge Board as an independent NED. The board of the enlarged Group is expected to be composed of five directors of whom two will be considered by the Board to be independent NEDs. Notwithstanding this, no proposals have been made on the terms of any incentive arrangements for relevant managers or the continuing Modern Water Directors and there have been no discussions in respect of these arrangements.

Background to Modern Water's Recommended Offer

Following the announcement of Modern Water's conditional equity placing on [24 January 2020](#), DeepVerge's CEO, Gerard Brandon, joined the Board of Modern Water as non-executive Chairman on [20 February 2020](#). Together with the appointment of [Dr Nigel Burton as a NED](#) at the same time, a strategic overview followed resulting in the implementation of structural changes. These were necessary to expose opportunity to move from high-ticket sales, which contained a high employee support cost, in the Company's desalination and the membrane operations, to a high volume, high margin recurring revenue strategy that already existed within its Monitoring Division.

Modern Water's Monitoring Division is based in the US and has a portfolio of toxicity and trace metal monitoring products, some of which constitute the regulatory standard. The toxicity monitors comprise the Microtox LX (laboratory based), Microtox FX (portable) and Microtox CTM (continuous monitoring) derivatives. All require a regular supply of reagents to detect toxicity. Trace metals are detected using the Microtrace PDV (portable and laboratory based) and the Microtrace OVA (continuous monitoring). The Monitoring Division has a sales presence in almost 60 countries, and six countries across the world have legislated that Modern Water monitoring test systems are written into their environmental protection legislation.

Modern Water's Membrane Division's All-Membrane Brine Concentration ('AMBC') can be used to tackle complex wastewater treatment problems at a reduced cost compared to standard processes, while being simple to operate. Modern Water's revenues are based on a design and installation fee and ongoing licence fees. The division also offers containerised desalination plants under the Aquapak brand.

Modern Water's Joint Venture Partners in China include Hangzhou Shangtuo Environmental Technology Co. Ltd ('Sunup'); in India, Advent Envirocare Technology Pvt Ltd and Ion Exchange (India) Ltd; and in South Africa, WEC Projects (Pty) Ltd.

Modern Water employs 15 people across the UK, US, Japan and China. As of Modern Water's [half year statement](#) to end-June 2020, it had tax losses accumulated over its past 30 years of operation that total c.£43.6m and which the enlarged Group expects to be able to utilise going forward.

Modern Water continues to retain a leadership position within the water contamination monitoring sector and is adding the latest technologies in e-commerce, logistics, communications, networking and data encryption which extends Modern Water's global reach beyond the US, Europe and Far East offices. As part of this strategy, Modern Water joined the [EcoWaterOS Consortium](#), launched by DeepVerge in February 2020. The EcoWaterOS Consortium is an end-to-end water contamination detection and decontamination solutions provider network, for real-time monitoring and detection of contaminated water. Modern Water also entered into a reagent supply agreement with DeepVerge on [18 March 2020](#) for its Microtox equipment. Furthermore, DeepVerge announced in July 2020 that it had entered into a collaboration agreement with Avacta plc for the evaluation of [Avacta Affimers](#) for the real-time identification of localised COVID-19 hotspots in wastewater, with the intention of using Modern Water's water monitoring distribution channels to sell upgraded Microtox equipment with DeepVerge sensors to detect COVID-19, subject to positive test evaluation results.

As a result of these transformative moves and strong accord between their respective management teams, Modern Water's Independent Directors stated their consideration that the Offer provides the opportunity for Modern Water to accelerate its new strategy as part of a larger group with greater access to capital and to reduce implementation risks, enhance the technical and human resources available, and grow shareholder value more quickly than any of the alternatives available.

Merger was the natural next step for DeepVerge

A successful merger with Modern Water will complete a transitional phase that DeepVerge started at the beginning of 2020. The fact that the coming together of their unique skillset, covering detection, monitoring, alert and AI capabilities, coincided with the onset of a global health crisis and the Board's ability to attract senior collaborative partners with key technologies willing to participate in the rapid development of timely, world-leading products capable of assisting global populations return to some form of normality, is highly fortuitous.

Collaborations between the two businesses provided invaluable insight into their opportunity to develop timely products and initiatives to address and service the enormous challenges faced by a planet gripped by the COVID-19 Pandemic. The complementarity of their technological offerings presented a vision to lead development, scale manufacture and international distribution of a number of key detection and alert products with potential to go mainstream around the globe. Driving the success of products such as Microtox BT (together with its Digital Health Pass that uses 'one second' QR Code scanners that could potentially contribute to enabling the economy to reopen with personalised go/no go entry into multiple different venues), Microtox PD (hot spot detection through sewerage to identify localised zones for urgent containment) and their related spinoffs over the next couple of years remains central to the Board's vision for significant expansion. In the process, the two operations will move closer together as they seek to exploit synergies/market opportunities identified, including:

- **Comprehensive monitoring and alert systems for human health ranging from viruses, bacteria to trace metals**
- **AI database that can learn from thousands of data points monitoring myriad contaminants to provide early warning, analysis and prediction capabilities**
- **Ground-based sales capability on three continents; Europe, US and China**
- **Ability to expand routes to markets with an online affiliate system and partnering with major water players across SCADA/asset/work management**
- **Larger group will have higher credibility and buying power**
- **Corporate cost savings with a single quoted entity**

DeepVerge's Labskin has secured access to the [SARS-CoV-2 virus Category 3 laboratory](#) at the University of Aberdeen to assess the strain 'SARS-CoV-2 England/2/2020' regarding its transmissibility impact to and from human skin without exposing human volunteers to potentially hazardous clinical trial contamination risk. As such, detailed examinations of strictly controlled *in vitro* tests are being undertaken. Importantly, the thirteen years of expertise the division has gathered in bacteria, virus and toxin detection and analysis will ensure the databases, abilities and laboratory processes that centre around its York-based laboratories, can be smoothly integrated with and utilised by Modern Water operations and prospective product development.

The wealth of laboratory reference data generated, potentially supported by DeepVerge's AI and analytic capabilities, is assisting the Group's gaining of a greater understanding of process and means by which coronavirus is able to so efficiently spread across the globe. Specifically, this work seeks to determine, (i) if the virus is transmissible from different surfaces to airways via skin by measuring its viability when recovered from surface(s) to skin; (ii) Sanitiser efficiency in killing the virus on skin and, (iii) The reduction of titer and/or virulence.

Integration of DeepVerge's AI platform will provide Modern Water with the ability to further modernise its capabilities, while exploiting the key data its operations generate from different water systems across the world. Governments worldwide have already recognised that monitoring of their populations' water and sewerage systems will be central to containment and warding off any future coronavirus health crisis. Data analytics within the latest AI systems, produced in collaboration with Company's partners positions its Modern Water subsidiary to receive multiple revenue streams from equipment, consumables and predictive services for existing and new clients that increasingly cross-over with those of its parent coming online to manage such risks.

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