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## NSW SBIR PPE & Water Purification Challenges Q&A Transcript

### Topic: Eligibility criteria

**How can a start up company apply if they do not have profit and loss statements available?**  
Live answered at 23:00

**Would a joint venture between a NSW company and an interstate company be acceptable?  
Would an interstate company committed to establish a strong presence in NSW qualify?**  
Live answered at 23:34

**If a company has an R&D based in NSW and manufacturing in another state, would they qualify?**  
Live answered at 32:55

**Are there any concerns if the technology for wastewater treatment is developed at a research institute/university and will be tested and commercialised by a joint team that includes a small company in NSW and the university?**  
Live answered at 49:50

### Topic: Application process

**What technological readiness level (TRL) would be required to be successful at the feasibility stage?**  
Live answered at 29:29

**Is it possible to collaborate and share potential solutions with other applicants or is it purely a competitive process?**  
Live answered at 31:11

**Will you look at how proposed solutions could work together? If one company develops a solution that would work well with another company's submission, would you look at combining the two solutions?**  
Live answered at 34:53

**How important is pure IP and R&D as opposed to building on existing proven technology?**  
Live answered at 49:06

**Is there a telephone number for inquiries or email only?**  
Please direct queries to [sbir@chiefscientist.nsw.gov.au](mailto:sbir@chiefscientist.nsw.gov.au).

**How will the current COVID restrictions on lab access be accommodated by the program?**  
Live answered at 1:04:31

**Should we have our method/process patented before application filed? Or after the proof of concept phase?**

Applicants need to hold the Intellectual Property or the rights to commercialise the proposed solution. When and whether applicants choose to patent their solution is a business decision for each applicant to make.

**Topic: Program funding**

**Can universities or companies charge for indirect costs including infrastructure?**

Live answered at 24:45

**In relation to funding for work outside of NSW, if we are conducting feasibility work (i.e. market research, pilot testing) outside of NSW would that be covered under the program?**

Live answered at 27:18

**Is there a maximum percentage for infrastructure cost charged by a university or company?**

Live answered at 30:17

**Topic: Current HealthShare approach to Personal Protective Equipment**

**Can you please share when the significant PPE contracts expire? In order to arrive at a commercially competitive solution, we may need to recommend different design or supply arrangements. Therefore, current PPE contracts and product design directly affect the potential for this challenge.**

Live answered at 25:58

HealthShare NSW, on behalf of NSW Health, manage the NSW State Government contracts and procurement of clinical equipment (including PPE) used in the health system. There are panel contracts with suppliers and purchasing PPE from these suppliers is driven by clinical demand and supplier's ability to meet our quantity demand needs. We anticipate a new Tender for NSW Health's Clinical Protective Apparel contract is expected to be undertaken in April 2023. All procurement is undertaken in line with relevant policies, and a robust product review and evaluation process is in place to ensure that products are safe and fit-for-purpose. This ensures that all PPE distributed to NSW Health staff complies with relevant standards, is listed on the TGA register and have been assessed by infection control experts as clinically fit for purpose intended.

**Are there any particular hospital sites or locations that can be accessed (or should be considered)?**

Live answered at 26:36

**What are typical examples of PPE? Do they contain polypropylene or other materials?**

The PPE stock includes gloves, eyewear, gowns, hand sanitiser, handwash, masks and cleaning products. Masks, Gowns and Sterilisation Wrap all contain polypropylene.

**How many waste streams are there today in a typical hospital? Infection control waste and general waste were mentioned, are there others that need to be isolated and not mixed with other streams?**

Live answered at 32:05

**How much material are we talking about (tonnes per year)?**

Taken on notice (34:05)

Approximate weights of waste (inclusive of PPE and other materials) disposed by NSW for FY21 is:

1. 37,700 tonnes of general waste
2. 5,200 tonnes clinical waste

Waste Streams are mainly broken down into Clinical, General, Recyclable and Secure Destruction across the state. In regards to PPE there is no specific waste stream and dependant on the use of the PPE it may be disposed of in General or Clinical Waste. Uncontaminated PPE can be disposed in general waste. If items are contaminated they are disposed of in clinical waste bins. It is important to note that current individual site/department processes for disposal make it impossible to track the specific tonnage of PPE as it is mixed with other materials.

**Topic: PPE Solution Requirements**

**Could you provide more context on 'resource separation systems to generate an uncontaminated material stream that can be reprocessed'? Especially around 'uncontaminated'?**

Live answered at 21:37

**Are there any sample solutions or ideas that are currently considered?**

Live answered at 25:15

**Can we provide an alternative re-usable equipment for PPE in the aim to reduce uses of disposable PPE?**

Live answered at 28:30

**Is a technology or method to improve the reusability of PPE considered a suitable solution for this challenge?**

We strongly recommend any applicants exploring this idea should review the infection control requirements on the CEC website.

**Topic: Current HealthShare approach to linen services and wastewater**

**Do all linen services in NSW have trade waste agreement with Sydney Water? Meaning Sydney Water will treat the wastewater. How many NSW linen service sites have onsite water recycling facilities?**

Live answered at 53:15

**Do your linen service sites also service other clothing products?**

Live answered 58:33

**Are you able to provide some information about the existing wastewater treatment process which are already on site - to provide context for what is already being done and what solutions might work.**

Live answered 59:05

Additional information: Currently mechanical filtration is the primary filtration system across the seven site. This filters down to approx. 70microns.

**Can you provide a list of detergents used in the washing process?**

The primary detergents used are sodium hydroxide and hydrogen peroxide. None of the detergents used contain any micro-bead particles.

**Topic: Water Purification Challenge Solution Requirements**

**For hospital wastewater, the concern is microplastics removal, but the challenge statement also mentioned blood and surfactants. If there is no access to hospital wastewater can the applicant consider domestic wastewater? Is it possible to consider other pollutants in hospitals wastewater like isotopes and pharmaceutical compounds?**

Live answered at 50:30

Additional information: Water analysis of trade waste water from HealthShare laundry/s will be part of Scoping Assessment and is likely to consider other pollutants. The majority of linen facilities are not on hospital sites, those that are do not share the same wastewater streams. Applicants will receive details of what is included in Scoping Assessment on a commercial in confidence basis by August 13.

**Are you looking for an online measurement of microplastic in wastewater, that can be integrated into a water treatment process or a lab solution?**

Live answered 51:40

Any measurement technology that can be integrated or taken between sites and offers ongoing on site measurement, would be preferable to lab testing.

**We realize there are a range of definitions for microplastics, but do you have a guidance of size (0.5mm - 100um) and what acceptable limits? Guidance on removal limits (do you want 99%+ or 70%+ removal)?**

Live answered at 55:20.

Additional information: A key objective of DPIE Scoping Assessment is to answer as many of these questions as possible.

**Do we have to worry about biological active agents in the waste?**

Live answered 56:23

**Can we get in touch with a linen service to understand their specific requirement?**

Live answered 56:52

**Can the innovation be only around the removal of microplastics rather than the quantification of microplastics?**

Live answered at 59:48

**Are recycling applications limited to use for washing or other re-use applications like irrigation and general washdowns.**

Live answered at 1:03:21

Additional information: Recycling application would ideally be for re-washing as there is limited domestic use.

**For the project is there a focus more on the measurement of the microplastics or their removal?**

Live answered at 1:04:00

Additional information: **There** will be a **baseline via Scoping Assessment** and the highest priority is removal, a solution which also provides ongoing measurement is ideal. An independent measurement device that could be used in multiple locations is also of interest.

**What is the acceptable added cost to make it feasible?**

Unknown. If technology had other applications including recycling, that would likely change acceptable cost.

**Will technology be assessed for microplastics removal only or capability to remove other contaminants in the wastewater and its environmental impact?**

This is dependent on outcome of Scoping Assessment but assessment is likely to consider other contaminants.

**Topic: Scoping study for the Water Purification Challenge**

**What will the scoping study cover?**

This will be disclosed by 13 August 2021.

**Will the scoping study provide a breakdown of the flows generated by the HealthShare laundry sites? That is, how is the 300ML/year distributed across the sites?**

Live answered at 52:33

**Is that flow breakdown of flows available now?**

There are 7 sites in total. Two of the larger sites use between 40-80k kL per year. The five smaller sites use between 1-11k kL per year. One site has access to a bore.

**What are the estimated microfiber concentrations in the wastewater?**

Live answered at 54:20

**Will the scoping study include existing water treatment facilities at each HealthShare site? Will they also provide a full water analysis (not just microplastics)?**

Live answered at 1:01:29

**As re-cycling is an important objective, could participants receive data on representative effluent quality (from current laundry facilities) AND target quality parameters for re-use.**

Live answered at 1:02:25